

Danish National Accounts

Sources and Methods 2003



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Preface

This publication describes in detail the sources and methods used for the compilation of the Danish national accounts. The documentation is an updating of the existing documentation up to now which was published in December 2001. In addition it contains so called “process tables”, which show how the different steps in the compilation process transform the basic data to the statistical data in the national accounts. It is available in English only.

The documentation uses 2003 as a reference year, but the descriptions relate to the sources and methods generally used in the compilation. The description is limited to the compilation of GDP and GNI and there is therefore no description of the compilation of the secondary distribution of income account, the use of disposable income account, the capital account, the financial accounts or the institutional sector accounts. The documentation covers the compilation of final accounts only. Hence, the compilations of provisional annual and quarterly accounts are not described.

The documentation is written with reference to the GNI Regulation (1287/2003), according to which Member States are obliged to provide updated documentation of their national accounts. It uses a common structure used by all EU Member states. Chapter 1 gives an overview of the system. Chapter two describes the revision policy. Chapters 3, 4 and 5 describe the compilation of GDP from the production side, the income side and the expenditure side respectively. Chapter 6 describes the balancing and validation procedure. Chapter 7 gives an overview of allowances for exhaustiveness. Chapter 8 describes the transition from GDP to GNI. In Denmark’s case, GNI (gross national income) published nationally and used for own resource purposes differ, and the differences are explained. Chapter 9 describes the calculation and allocation of FISIM (Financial Services Indirectly Measures). It should be noted, that the allocation of FISIM has no impact on GNI used for own resource purposes. Chapter 10 shows the main classifications used (NACE, COICOP, COFOG etc.) whilst chapter 11 lists and describes main data used. Chapter 11 is based on Statistics Denmark’s declarations of content, which are available from Statistics Denmark’s web site. In addition, there are 9 annexes of which annex 9, which contains the above mentioned process tables, should be mentioned in particular. The process tables contain cross references to relevant chapters and sections of the documentation.

The documentation was written by several employees in the two national accounts divisions in Statistics Denmark. Main contributions have been made by Søren Larsen, Jens Holst Jensen and Annette Thomsen.

Statistics Denmark, June 2007

Jan Plovsing /
Annette Thomsen

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1. Overview of the system of accounts

1.1 Introduction

1.1.1 Main approaches and geographical coverage

In accordance with the Commission Regulation (EC) No 109/2005, the Danish national accounts cover the economic territory of the Kingdom of Denmark except for the Faeroe Islands and Greenland.

The Danish national accounts consist of both annual and quarterly accounts. The official balance of payments estimate is consistent with the national accounts rest-of-the-world account. As from the 1997 publication, the Danish national accounts have been compiled in accordance with the guidelines in the European System of Accounts (ESA 95). Consistent time series are available back to 1966.

The Danish national accounts are built around an integrated set of supply and use tables and institutional sector accounts. Initial unbalanced GDP estimates are to a large extent calculated independently from the output and expenditure sides and balanced in a detailed product balance system covering around 2 350 products, some 1 960 of which are goods and 410 services. The result is a balanced set of supply and use tables and integrated production and generation of income accounts for industries and institutional sectors. The sector-industry tables are thus an integral part of the final annual national accounts. With the balanced supply and use tables as a starting point, symmetrical, industry x industry input-output tables are constructed annually on the basis of the "industry technology assumption".

Since 2001, annual financial accounts are also produced and net-lending from the financial transaction account and the non-financial accounts are reconciled in a balancing process. In addition capital stock estimates (produced assets) are compiled using gross fixed capital formation series at industry level, which secures consistency between investment and capital stock series. This system also produces consumption of fixed capital series. Finally, labour productivity is produced for annual figures.

The only case where ESA 95 is not followed is on the recording of payments on the harmonised VAT basis which accrue to the EU in connection with the third own resource. According to ESA 95 paragraph 4.14, this resource should be recorded as taxes on products paid by residents to the EU (D.211). When implementing the ESA 95, Denmark found this rule unrealistic from an economic point of view. Instead, these payments are recorded as a current transfer from Denmark to the EU. Total VAT revenue is recorded as income for the resident general government sector.

As regards the classifications of industries, both the primary statistics and the national accounts are based on the NACE Rev. 1. The Danish industry classification *Dansk Branchekode*, DB 03, is a national, more detailed version of the NACE Rev. 1.

As regards commodity classifications, both product statistics covering manufacturing and external trade statistics use the EU's CN (Combined Nomenclature). The national accounts' product classification (around 2 350 products) likewise complies with the CN classification, but at a higher level of aggregation. The national accounts' product balances can be converted to the EU's CPA product classification at the 4-digit level

As regards the classification of household final consumption, the Danish national accounts are based on the international classification of individual consumption by purpose, COICOP, and there are no exceptions of any kind. The most detailed consumption grouping comprises 72 groups. The breakdown is substantially more detailed than is required by the ESA 95 Regulation.

All units and transactions in the general government sector are classified according to the COFOG, again at a much more detailed level than is required by the ESA 95 Regulation. Product transactions involving general government are cross-classified by transaction type (ESA 95), by industry for the producer unit concerned (NACE Rev. 1), by sector for the institutional unit concerned (ESA 95) and by function for the relevant transaction (COFOG).

1.1.2 Organisation of national accounts work in Statistics Denmark

Statistic Denmark's organisation chart as at 22 March 2006 is attached in Annex 1 and the organisation chart for the national accounts in Annex 2. Statistics Denmark is divided into four directorates, three for statistics on particular fields and one for user services. Under the Act on Danmarks Statistik [*Lov om Danmarks Statistik*], the institution is independent of government as regards all technical aspects of statistics. It is headed by a Board of Governors whose members are appointed by the Minister for Economic Affairs. Since the Act was passed in 1966, the members of the Board have been experienced representatives of the business world, the world of research and local government. No ministries are represented. Under the legislation, the National Statistician, who is appointed as a permanent official, is responsible for the technical and administrative management of the institution and is also Chairman of the Board. He reports directly to the Minister for Economic Affairs on all administrative and economic issues. It is Danish parliamentary practice for all draft EU legislation which is to be negotiated in the Council to be put before the *Folketing's* Europe Committee, which gives the Minister a negotiating brief. This ensures that Parliament retains control over the extremely important share of statistical output which arises from EU legislation and which therefore actually comes within the scope of the Board.

From the organisational point of view, responsibility for national accounts falls to the Directorate for Economic Statistics. The work is divided among two divisions known as "National Accounts" and "Public Finance". In addition the balance of payments is compiled in a separate division and it is ensured that the rest of the world account is consistent with the balance of payments. As annex 2 shows, the National Accounts division employs 25 persons (annual full time equivalents). In the division for Public Finance about the same number of persons are working on national accounts.

The National Accounts division is responsible for the estimates of the "functional" national accounts, that is the goods and services account including supply and use tables and input-output tables in current and constant prices. The division is also responsible for non-financial institutional sector accounts for households, the non-financial sector and the rest-of-the-world account. In

addition it is responsible for capital stock estimates, labour productivity, environmental accounts and quarterly accounts.

The Public Finance division calculates the general government sector including financial accounts.. In addition, the division is responsible for non-financial sector accounts for the financial sector and financial accounts for all sectors. The division also covers accounting statistics for industries dominated by publicly controlled corporations. It is also responsible for administrative uses of the national accounts, i.e. fourth own resource (GNI), third own resource (VAT) and the excessive deficit procedure (EDP). Besides the national accounts work, the division is responsible for collecting accounts from local government and some credit market statistics.

1.2 The revisions policy and the timetable for revising and finalising the estimates

1.2.1 Current revisions

Final national accounts data are calculated three years after the reference year (year $t+3$). Several versions of preliminary accounts are calculated before that. The first version is available as the sum of quarters two months after the end of the reference year, and the last preliminary version is published at the end of year $t+2$ (see table 1.1).

Table 1.1: Revision policy of the Danish NA, from 2001

Year	Month of publishing	Year T, Q1	Year T, Q2	Year T, Q3	Year T, Q4	Year T
T	End May	P				
	Begin. July	R				
	End August	-	P			
	Begin October	R	R			
	End November	-	-	P		
T+1	Begin. January	R	R	R		
	End February	-	-	-	P	P(SQ)
	Begin. April	R	R	R	R	R(SQ)
	Begin. July	R	R	R	R	R(SQ)
	Begin. October	-	-	-	-	-
	End December					R(AP1)
T+2	Begin. January	R	R	R	R	-
	Begin. April	-	-	-	-	-
	Begin. October	-	-	-	-	-
	End December					R(AP2)
T+3	Begin. January	R	R	R	R	-
	Begin. April	-	-	-	-	-
	Begin. October	-	-	-	-	-
	End December					F
T+4	Begin January	F	F	F	F	

P: First published

SQ: Sum of quarters

R: Revised

AP1: First preliminary annual calculation

F: Final

AP2: Second preliminary annual calculation

-: Figures are published unchanged compared to the earlier published figures.

The revisions of the quarterly figures in January T+2, T+3 and T+4 are made in order to make the quarterly figures consistent with the annual figures.

The revision policy is announced to users and the reliability of preliminary national accounts figures are measured and published along with the publication of the national accounts.

1.2.2 Benchmark revisions

The results of the latest benchmark revision was published in 2005 – the so-called “datarevision”. This benchmark revision was minor in the sense that no new classifications and definitions were

introduced and that ESA95 is still followed. The larger exceptions, affecting the compilation of GDP, are:

- The distribution of FISIM to users
- Foreign trade of services are now recorded gross for im- and export. Before they were recorded as net-import or net-export.
- New COFOG classifications

As the national accounts has gradually introduced new accounting statistics, the existing compilation systems were - for the larger part - unchanged. New systems were developed for the compilation of dwellings, bank services, public non-market services and the gross-recording of foreign trade in services. In other areas the revisions follow a revaluation of the compilations fx in areas of growing importance in the economy.

1.3 Outline of the production approach

1.3.1 GDP according to the production approach

For 2003, the calculation of output-based GDP can be summarised as in the table below:

Table 1.2: GDP, production approach, 2003

	Value,	% of
	DKK million	GDP
Output at basic prices	2 353 944	168
- Intermediate consumption	1 152 877	82
+ Taxes on products	218 279	16
- Subsidies on products	18 656	1
GDP	1 400 690	100

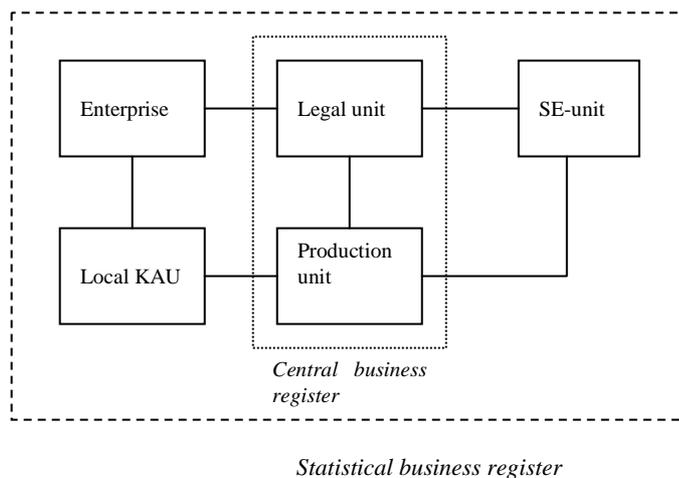
The aggregate estimate of value added is based on an estimate at the level of the national accounts' most detailed industry grouping. The national accounts are balanced at the 130-industry level in the supply and use tables. Balanced values for value added divided by industry appear in the final national accounts for 130 industries in prices for the year in question, in fixed 2000 prices and as time series of Laspeyeres chain indices based on estimates in the previous year's prices.

1.3.2 The business register

In Denmark only one Central business register exists. It is run by *Statistics Denmark, Skat* (Customs and Tax) and *Erhvervs- og selskabsstyrelsen* (Danish Commerce and Companies Agency).

The business register used in Statistics Denmark for statistical purposes is a copy of the Central business Register plus additional information, as shown in figure 1.1.

Figure 1.1: Business register, overview



For statistical purposes, Enterprise and Local KAU is used. The administrative units are the Legal unit and the Production unit. For VAT-purposes, the SE-unit is used.

1.3.3 Main data sources

General government

For central government, the main statistical source is central government accounts. For local government, the main source is local government accounts for all 275 municipalities and 14 counties. For the “self-owning” institutions, under both central and local government, annual accounts, assumed to cover the whole population, are collected. For the social security funds, the statistical source is their annual accounts, which are collected for all units concerned.

The units included in the statistical system for public finance as producer units in S.13 and those units which are classified in the business register as government non-market units are exactly the same. The grouping of government units by purpose, COFOG, is only added in the public finance statistical system and not in the business register.

The accounting plan in central government accounts is not the same as that used for local government accounts. All municipalities and counties are obliged to use the local government plan. When compiling national accounts, the accounts for central government, local government, “self-owning” institutions and social security funds are coded with national accounts classifications based on ESA95. Then they are stored in one compilation system, the *DIOR database* [*Databasen for integrerede offentlige regnskaber, i.e. database for integrated public accounts*]. All individual entries at the most detailed level of the primary accounting systems are given an ESA95 code. All entries are classified by type of transaction, by purpose and by industry.

Financial institutions

The sectoral delimitation of the subsectors complies strictly with the ESA 95 rules. Subsectors S.121 The central bank and S.122 Other monetary financial institutions have complete accounts.

In subsectors S.123 Other financial intermediaries and S.124 Financial auxiliaries, certain units are not covered by the financial accounts statistics collected by the supervisory authority, Finanstilsynet, or by Statistics Denmark. For S.123, those accounts which are available for the sector are grossed up to cover all units in that sector on the basis of employment. Enterprises in S.124 are covered by company accounts also grossed up on the basis of employment to cover the total population.

Insurance corporations and pension funds are covered in full by *Finanstilsynet's* accounting estimates.

Publicly controlled non-financial corporations

In 2003, the following industries in the national accounts' 130 grouping were included in whole or in part in the special treatment of industries where units controlled by government:

401000	Production and distribution of electricity
402000	Manufacture and distribution of gas
403000	Steam and hot water supply
410000	Collection and distribution of water
601000	Transport via railways
602100	Other scheduled passenger land transport
602409	Freight transport by road and via pipelines
620000	Air transport
631130	Cargo handling, harbours, etc.: travel agencies
640000	Post and telecommunications
900010	Sewage removal and disposal
900020	Refuse collection and sanitation
900030	Refuse dumps and refuse disposal plants
920001	Recreational, cultural, sporting activities (market).

For the above industries, the source for the national accounts estimate is "statistics for public enterprises", extended to cover all units in the industries in question. As general government statistics are compiled in line with national accounts principles, the extended statistics for public enterprises are processed according to national accounts definitions and presented according to the accounting plan for non-financial corporations in the ESA 95. One of the reasons is the desire to be able to produce a national accounts estimate of the "public sector", which is a combination of general government (S.13) and public corporations (S.11001). The public sector is all producer units in the economy under public control.

Grossed up industrial accounts statistics (non-financial corporations)

Non-financial corporations other than the government-controlled and the household sector (sole proprietorships and households as owner-occupiers) together account for by far the largest share of market output in the economy. As a general rule, value added is calculated from the two sets of accounts statistics, namely:

a) the industrial accounts statistics, which is by far the most important, covering for 2003 all non-financial producer units other than general government and industries where public corporations traditionally predominate and

b) "SLS-E accounts statistics", which cover the remainder of the economy, mainly certain personal service industries. This is accounts statistics based on standardised accounts (SLS-E=*Statens Ligningsystem for Erhvervsdrivende*), the government tax assessment system for businesses), which all firms, with certain exceptions, have to send in to the tax authorities together with their tax returns.

It should be borne in mind that information from the SLS-E statistics is used for the grossing up of the industrial accounts statistics as well as for compiling the industries mentioned under b) which are not covered by industrial accounts statistics.

Agriculture, horticulture and the raising of fur animals

The statistical source for agriculture, horticulture and the raising of fur animals is Denmark's Statistik's agricultural statistics which, as already stated, are a national accounts estimate. The statistics comply with the guidelines in Eurostat's agricultural statistics manual. The calculations of intermediate consumption are based on 1) quantities of products used multiplied by the average selling price, 2) accounting information collected by the economic advisers for agriculture and 3) annual accounting statistics for agriculture and horticulture compiled by *Statens Jordbrugs- og Fiskeriøkonomiske Institut*.

Dwellings

The output value of dwellings is estimated every fourth year as a benchmark calculation of the price times volume type, based on the total stratified housing stock and comprehensive rental figures covering almost two-thirds of all dwellings in Denmark which are let. Both sources must be considered to be of high quality.

In years between the benchmark calculations, the latest benchmark is projected using price and volume indicators. The price indicator is rental information from the sample survey of rentals which is carried out every six months to provide information on changes in rentals in the consumer price index. The volume indicator is information from building statistics based on *Bygnings- og Boligregistret (BBR)* [the Register of buildings and dwellings] which gives the number of square metres constructed combined with an estimate of the number of dwellings demolished.

The benchmark calculation is particularly detailed and uses the stratification method which the GNP Committee approved as the preferred method. The stratification of the housing stock is much more detailed than the minimum requirements set out in the Commission Decision (95/309/EC, Euratom). Whilst this Decision requires a minimum of 30 strata, the Danish calculation of levels for 1999 uses roughly a thousand strata.

Non-profit institutions serving households

By far the largest expenditure component in the case of private non-market output is the wage or salary bill. In Denmark, the ERE* statistics calculate the total wage or salary bill in all producer

* *Erhvervsbeskæftigelsesstatistik*, translated into English in Denmark's Statistik publications as "Establishment-related employment statistics" (ERE). Please see Chapter 4.

units in the economy, including in private non-profit institutions serving households. This is the main source for the calculation.

For want of accounting statistics in this field, the other components in the estimate of output from the costs side, i.e. intermediate consumption, consumption of fixed capital and other taxes and subsidies on production, are calculated on the basis of the accounts for the largest trade union (HK).

Private households with employed persons

Statistics Denmark has carried out two benchmark surveys linked to the labour force surveys for 1992 and 2004, in which the households were asked a series of questions on their untaxed activities. Interviewees were asked about the number of hours worked and their income. On the basis of these figures, benchmark values were fixed for output by grossing up to the total population.

From 1992 and onward values were projected in the current years using changes in the net price index (consumer price index excluding taxes on products and subsidies) for cleaning. And of course, the new benchmark value in 2004 gave an opportunity to make a minor revision of the figures in the years between the two benchmarks.

1.3.4 Transition from private accounting and administrative concepts to ESA95 concepts

Intermediate system 1

After processing, all the accounting statistics underlying the national accounts calculations of value added are transferred to a common accounting plan, namely the plan used in the “intermediate system” shown in Table 3.16. The first version of the intermediate system is simply a file that contains the data from the four main systems after they are transformed to the common codes. In this file firms (institutional units) are broken down wherever necessary into producer units, so that the statistical unit for the calculation of value added, as required in the ESA 95, is the producer unit or a hypothetical unit of homogeneous production.

It should also be noted that estimates for units under threshold value have already been included as part of the calculations in the accounts statistics system.

In spite of the level of detail, various accounting items still do not correspond to national accounts concepts in the first version of the intermediate system because information from accounts alone is insufficient to perform the full transition.

Intermediate system 2

A second – and final – version of the intermediate system is the result of a number of corrections to the first version of the system. These corrections include:

On the supply side:

- 1) Production in the hidden economy.
- 2) Fringe benefits produced from own production.
- 3) Revenue from licenses and royalties.
- 4) Software produced on own-account.
- 5) Entertainment, literary and artistic originals
- 6) Price correction of changes in inventories of finished goods, work in progress and goods for resale.

On the uses side:

- 7) Fringe benefits purchased
- 8) Financial intermediation services paid for directly.
- 9) FISIM
- 10) Correction for net insurance premiums
- 11) Public fees
- 12) Expenditure on licences and royalties
- 13) Software produced on own-account
- 14) Purchased software
- 15) Price correction of changes in inventories of raw materials.
- 16) Small tools etc.

1.3.5 The main approaches taken with respect to exhaustiveness

The main initiative aimed at ensuring that coverage is exhaustive consists primarily of the very important work being carried out to ensure that the business register is updated to include new producer units.

Fringe benefits and irregular economic activity such as underreporting and hidden activity are covered by corrections which are explicit wherever possible. These are based on the principles of Commission Decision 94/168/EC, Euratom, the "exhaustiveness decision" and are described in detail in chapter 7.

In addition, Statistics Denmark includes for the purpose of the "fourth on resource" the value added resulting from illegal activity which according to ESA95 is part of the production boundary. The calculation and correction are described in chapter 7 and 8.

1.4 Outline of the income approach

1.4.1 GDP according to the income approach

For 2003, the calculation of income based GDP can be summarised as in table 1.3 below:

Table 1.3 GDP, income approach, 2003.

	Value, DKK million	% of GDP
Compensation of employees	763 262	54
+ Gross operating surplus and mixed income	436 509	31
+ Taxes on production and imports	243 680	17
- Subsidies	42 761	3
=GDP	1 400 690	100

All components of GDP compiled from the income side (GDP(I)) are compiled at the 130 industry level.

1.4.2 Main data sources

The main sources used for compiling GDP from the income side are:

- The annual working time accounts (WTA) (compensation of employees)
- The system for compiling fixed capital in the national accounts (consumption of fixed capital)
- Administrative data used for compiling general government (other taxes on production and imports and other subsidies on production)
- Gross operating surplus and mixed income are compiled as residuals.

The WTA is compiled in Statistics Denmark's division for labour market statistics. The WTA is used almost directly in the national accounts and only with a few adjustments made in the national accounts. The background for the WTA is a considerable expansion in the number of statistics covering the labour market and the fact that the figures from different statistics are not immediately comparable. The WTA is a statistical system integrating already existing labour market statistics.

1.4.3 Transition from private accounting and administrative concepts to ESA95 national accounts concepts

The main statistical source for the estimate of compensation of employees is the WTA. Table 1.4 shows the result of the transition from primary statistics, the WTA, to the national accounts calculation for compensation of employees.

Table 1.4: Compensation of employees in the WTA and the national accounts, mill. DKK

	2003
Working Time Accounts	741 613
Initial adjustments	-822
Alternative sources replaces WTA	5 295
General government non-market replaces WTA	6 958
Non-declared ("black") wages	1 941
Difference between fringe benefits	
Difference between pension contributions	7 530
Basis for the national accounts	764 158
Other adjustments for consistency	-670
Final national accounts estimate	763 262

Gross operating surplus and mixed income are based on the estimate of value added from the production side.

1.4.4 The main approaches taken with respect to exhaustiveness

The most important explicit allowances for exhaustiveness related to GDP according to the expenditure approach are fringe benefits and the black economy. For a detailed description please see chapter 1.7 and chapter 7.

1.5 Outline of the expenditure approach

1.5.1 GDP according to the expenditure approach

For 2003, the calculation of expenditure-based GDP can be summarised as in table 1.5 below:

Table 1.5 GDP, expenditure approach, 2003

	Value, DKK million	% of GDP
Total final consumption expenditure	1 038 178	74
Household final consumption expenditure	656 340	47
NPISH final consumption expenditure	10 602	1
General government final consump. expenditure	371 236	27
Gross capital formation	274 962	20
Gross fixed capital formation	269 835	19
Changes in inventories	3 210	-
Acquisitions less disposals of valuables	1 917	-
Exports of goods and services	635 114	45
Imports of goods and services	547 565	39
GDP	1 400 689	

The table shows that household final consumption expenditure in Denmark made up a little less than half of GDP in 2003, general government final consumption expenditure a good quarter, gross capital formation one-fifth and net exports the final 6%. Exports of goods and services accounted for 45% and imports 39%.

1.5.2 Main data sources

The most important sources for the estimate of the components of expenditure-based GDP are the following:

Household final consumption expenditure:

Retail trade statistics, DOI (level of retailable consumption)
The FU [household budget survey] (structure of retailable consumption, services)
VAT statistics
Surveys of housing rentals
Housing surveys (housing stock, stratified)
Energy statistics (electricity, gas, district heating)
Statistics on financial institutions (financial services)
Statistics on public finances (user payments to public institutions)
Tax statistics (quantities of goods on which excise duties are levied)
Supply side estimates
Motor vehicle statistics (households' acquisitions of new cars)
Balance of payments statistics (tourist revenue and expenditure)

Final consumption expenditure in NPISHs:

ERE [establishment-related employment statistics] estimates of total wages and salaries

Gross fixed capital formation:

Agricultural statistics
Public finance statistics
Accounts statistics for industries predominated by public corporations
Register of buildings and dwellings (BBR)
Index of construction costs
Product statistics for the IT industries
ICT expenditure
External trade statistics
Industrial accounts statistics
Specific industry statistics
Media statistics
Register of motor vehicles
Register of vessels
Register of aircrafts

Acquisitions less disposals of valuables:

Industrial commodity statistics
External trade statistics
Household budget survey (FU)

Changes in inventories:

Industrial accounts statistics
SLS-E statistics
Accounting statistics for industries where public corporations predominate
Specific industry statistics, including agricultural statistics
Energy statistics
Agricultural statistics

Imports and exports of goods and services:

External trade statistics (Intrastat and Extrastat)

Balance of payments statistics

Settlements statistics from the *Nationalbank*

VAT statistics

Accounts statistics for sea water transport.

By far the largest share of expenditure-based GDP is calculated using a direct estimate. The most important exceptions are household consumption of hotel and restaurant services, dwelling services, consumption in NPISH, which are all calculated indirectly from the supply side.

For some consumption groups of household final consumption expenditure, more than one source is available. In these cases, an assessment of which source is the most reliable for estimating the variable (consumption group) has been made. The assessment mainly relates to whether the consumer survey (FU) should be replaced by another source.

The main rule in the Danish national accounts has been that wherever possible the FU has been replaced by other information to *determine levels*, but it is widely used to determine the structure of expenditure – for the breakdown of food consumption into individual foodstuffs, for example. For retailable consumption, i.e. that share of private final consumption which passes through retail trade, the FU figures are replaced by retail sales figures which must be considered a much better statistical source for determining levels of private consumption. The FU figures are used to divide the aggregate groups from retail sales statistics into the detailed consumption groups. For energy products and acquisitions of motor vehicles, there is special information available based on physical data.

Acquisitions less disposables can in principle be estimated in two ways, either directly using information on the expenditure (uses) side (purchaser's side) or indirectly on the basis of supplies of products to the domestic market, using estimated shares of supplies to the final demand components to calculate final uses from the resources side. During the recent years widening of the scope of the industrial accounts statistics have led to estimates of GFCF in machinery, equipment and major building repairs that have gradually changed from supply side estimates to estimates that are mainly based on information from the uses side. The estimates for construction of new buildings are based either on accounting statistics with very detailed coverage of actual observations or a calculation based on the exhaustive register of buildings (the BBR) and prices pr square meter for the different types of buildings. However, even after the introduction of a direct expenditure based estimate of capital formation in machinery and equipment, it is likely that it will be adjusted to some degree to take account of supply side estimate

Since the Danish national accounts are adjusted in a detailed product balance system, there is a systematic confrontation in connection with the balancing. One of the strongest cross-checks for the compilation of national accounts consists in comparing information from purchasers on their acquisitions less disposals of the individual products or groups of products with information on the sellers' side on supplies to the domestic market.

1.5.3 Transition from private accounting and administrative concepts to ESA95 concepts

In household and business accounts, purchases of goods and services are recorded in terms of purchasers' prices including non-refundable VAT. Refundable VAT is not included in the acquisition prices, on which information is available, which is consistent with the ESA 95 net VAT system.

Various acquisitions which the national accounts treat as gross fixed capital formation are included in business accounts as current operating expenditure in the form of intermediate consumption or wages and salaries which are not capitalised. Examples would be consumables as well as purchased and own-produced software. The corrections on the expenditure side are a mirror image of the corrections to the output value (e.g. own-produced software) and intermediate consumption (consumables and purchased software) in the output-based estimate as described in chapter 1.3 and chapter 3.

For each type of inventory, changes in inventories in the business accounts are calculated as the value of closing stocks minus the value of opening stocks, estimated according to the enterprises' own accounting principles, which means that opening and closing stocks are calculated at different price levels. In the national accounts, changes in inventories should be estimated at the average prices for the year. Ideally, changes in inventories should be monitored throughout the year and all changes split into revaluations (holding gains) and national accounts changes in inventories. Normally, a reasonable approximation of the correct change can be produced by converting the value of both opening and closing stocks to the average prices for the year using the ratio of the year's average price to the price on the date of the inventory estimate. In the Danish national accounts, opening and closing stocks are converted to average prices for the year for all combinations of product number/target total module code/DK-NACE industry/sector following the breakdown of inventory totals by product. The national accounts change in inventories is calculated as closing stocks minus opening stocks for each of these combinations.

For import and export of services, the statistical challenge arising from the use of settlements statistics for the estimate of *aggregate* exports/imports of services lies in ensuring that the definition of what constitutes an export or an import of services remains consistent with the external trade statistics and national accounts estimates of exports of goods f.o.b. and imports of goods c.i.f. Therefore, a correction is made to exports and imports of services as estimated in the settlements statistics to bring the latter into line with the estimate of exports of goods f.o.b. and imports of goods c.i.f.

1.5.4 The main approaches taken with respect to exhaustiveness

As regards the legitimate (as opposed to the black) economy excluding fringe benefits, the most important steps taken are corrections and supplements to the sources underlying the calculations of household consumption expenditure. Retail sales statistics do not cover all industries of retail trade. In the national accounts calculations, these statistics are therefore supplemented by VAT statistics to ensure that the whole of retail trade is covered.

The calculations of fringe benefits and the black economy are discussed in chapter 1.7 and chapter 7.

1.6 The balancing or integration procedure and main approaches to validation

Before the balancing of GDP can take place in the supply and use tables (SUT), so-called target totals for supply and use are compiled. This is done by collecting the information from intermediate system 2 and other systems in the target total module. When the target totals for supply and use are compiled, they are subsequently distributed by 2 350 products.

The current system of SUTs for Denmark was established in the mid-seventies. Since then the calculation of annual SUTs has been a totally integrated part of the compilation of annual National Accounts in both current and constant prices.

The integration of SUT in the compilation of National Accounts implies that a number of NA aggregates are derived directly from the SUT. This in particular relates to all the NA aggregates in the "Goods and services account" and the "production account". The integrated procedure is in contrast to a procedure where SUT are compiled after the production of the NA figures implying a number of restrictions on the totals of the SUT.

The Danish SUT are compiled in connection with the final annual accounts, which are released with a delay of almost three years. The structural information entailed in the SUT for the latest final year is used in the compilation of preliminary annual and quarterly national accounts but no balanced preliminary or quarterly SUT are produced.

The process of constructing the SUT for a given year can be summarised into the following steps:

The first step is to gather all the available data on the actual year on target totals and other values that can be entered directly into the system as predetermined.

The next step is to create a complete initial version of the SUT. This version is compiled using automatic processes, but at this stage a number of unsolved problems will remain: For some products supply will not equal uses. For most categories of use the totals will usually differ from their targets. Total trade and transport margins and total VAT may also differ from their respective targets. This step is referred to as "Automatic balancing".

Then follows a step, where the initial version of the product-balances is adjusted manually. The unsolved problems are examined closely. In many cases such problems will reveal errors in the calculations that produce data-input to the product-balances or in the primary statistics itself. Solutions to such problems may be found in co-operation with the relevant sections of the statistical bureau and may involve changes in supply, predetermined uses or target-totals. A number of products are redistributed between uses to bring the distance between totals and targets within an acceptable range for each category of use. Corrections to the initial balances are entered into the system to create a new - but not yet final - version. This step is referred to as "Manual balancing"

In the last step the differences between totals and targets are removed except where such differences are considered acceptable. In this step trade and transport margins and VAT are finally adjusted to their targets. This step is referred to as "Final balancing".

As described, the balancing of GDP from the production side, GDP(P), and GDP from the expenditure side, GDP(E), takes place in an integrated supply-use framework.

Table 1.6 shows an extract from the process table for 2003. Process tables show how initial primary statistics are corrected, adjusted and balanced in order to compile GDP. Appendix 9 shows the full process table. Table 6.1 shows that the balancing accounts for +0,1 percent on GDP(P) and -1,6% on GDP(E). On the other hand, data validation accounts for -3,4% on GDP(P) and 0,0 % on GDP(E).

Table 1.6: Compilation of GDP, extract from the process table. 2003.

	Basis for NA figures	Conceptual and other adjustments	Data validation	GDP before balancing	Balancing adjustments	Balanced GDP
Mill. DKK						
GDP(P)	1.405.153	41.250	-47.388	1.399.015	1.680	1.400.694
GDP(E)	1.392.014	31.125	-130	1.423.009	-22.319	1.400.690
% of GDP						
GDP(P)	100,3	3,0	-3,4	99,9	0,1	100,0
GDP(E)	99,4	2,2	0,0	101,6	-1,6	100,0

Note: The difference between balanced GDP(P) and GDP(E) is purely due to rounding errors in the process table.

GDP from the income side, GDP(I), is not described in the process table, because it is not an integrated part of the balancing in the supply-use framework. It is therefore not relevant to show GDP(I) before balancing and balanced GDP(I) in this context.

1.7 Overview of the allowances for exhaustiveness

Explicit allowances

Table 1.7 shows explicit allowances for exhaustiveness in the Danish national accounts. The explicit allowances account for 33.9 bill. DKK or 2.4 percent in 2003.

Table 1.7 Explicit allowances in the national accounts, 2003

Explicit allowances	Value, DKK mill.	% of GDP
Farmers' output for own consumption etc.	196	0.01
Own-account production of software and large databases	11 876	0.85
Output of entertainment etc. originals	1 507	0.11
Fringe benefits for employees	9 645	0.69
Hidden activity, underreporting and the corresponding VAT fraud	10 650	0.76
Total	33 874	2.42
GDP	1 400 689	100

Values for *farmers' output for own consumption etc.* are available from agricultural statistics and are assumed to cover farm-gate sales as well, most of which presumably come under the black economy.

Values for *own account software and artistic originals* are calculated as part of output in relevant industries.

For 2003, allowances are imputed for *payments in kind to employees (fringe benefits)* covering the following seven products:

- 1) free cars
- 2) free telephone
- 3) canteen subsidies
- 4) free housing
- 5) free travel
- 6) free newspaper
- 7) free pc

In 2003, the total amount was DKK 9 645 million. Of these seven goods, free cars and subsidies to canteens are by far the most important, accounting for DKK 3 793 million and 4 245 million respectively.

In the Danish national accounts, there are two types of allowance for *the black economy*. First of all, there are estimates for the *work that is hidden* to the public authorities in order to avoid taxes. In these cases, both the seller and the buyer of a product will typically know that the production is not reported to the tax authorities, and the price will be below market price. Secondly, there are allowances for the *under-reporting and the associated VAT fraud* that companies take advantage of. In these cases, buyers do not necessarily know that the production is not declared.

The values for the black economy in 2003 are based on a benchmark study in 2004, which was partly financed by the EU¹. For the benchmark study, the value of the *hidden work* is estimated using telephone interviews while the estimates for the value of *under-reporting and associated VAT fraud* are found using the discrepancy method and other indicators. The results from the 2004 benchmark study and the benchmark study before that from 1992 are then interpolated using various methods.

Statistics Denmark includes *illegal activity* in GDP and GNI for own resource purposes only. It is not included in our national publications. An inclusion in the national publication will be considered in connection with the next major revision. According to ESA95, illegal activity is included in the production boundary. Illegal activity differs from the black economy in that the activity is illegal in itself. The black economy is illegal in the sense that the evasion of taxes etc. makes it illegal, but the activity is not illegal as such.

For practical purposes, illegal activity includes smuggling, prostitution and drugs. Table 1.8 shows total value added related to illegal activity.

Table 1.8: Illegal activity, value added. Mill DKK.

		2002	2003	2004	2005
Value added:					
	Smuggling	335	281	241	255
+	Prostitution	1.169	1.161	1.155	1.224
+	narcotics	1.477	1.228	900	953
=	Illegal aktivitet, total	2.981	2.670	2.296	2.432

Implicit allowances

No explicit allowances for underreporting are made in agriculture etc, mining and quarrying, dwellings, letting of non-residential premises, industries where public corporations predominate or general government. In mining and quarrying, financial activity and general government, the black economy is assumed not to exist, since these activities are carried out either by public authorities or by very large entities which are closely monitored by public authorities.

For agriculture etc. and dwellings, output is estimated, as described in Chapter 3, using a price times quantity calculation. This captures the value of underreporting and work in the black economy implicitly, since the method ensures that all output in these areas is covered. But it is not possible to estimate concealed activity explicitly. The same goes for letting of non-residential premises, where the output value is estimated from the expenditure side.

¹ The study is described in detail in the report "Underground production in Denmark" by Statistics Denmark from 2004.

1.8 The transition from GDP to GNI

Table 1.9 shows the transition from GDP to GNI published nationally and GNI for own resource purposes.

Table 1.9 Transition from GDP to GNI, 2003

	DKK mill.
GDP	1 400 690
+ Compensation of employees from the ROW	6 158
- Compensation of employees to the ROW	6 772
+ Property income from the ROW	65 576
- Property income to the ROW	80 198
- Taxes on production and imports to the ROW	2 341
+ Subsidies from the ROW	9 007
= Nationally published GNI (ESA 95)	1 392 120
+ Illegal activity	2 670
- EU's third own resource (definitional difference)	2 828
- FISIM	14 274
= GNI for fourth own resource purposes	1 377 688

The main source for *compensation of employees* is Danmarks Nationalbank's settlements statistics with some corrections, fx. for Danish building workers working abroad and for gross recording, ie. recording before the deduction of taxes.

The main source for the *interest* item is Danmarks Nationalbank's settlements statistics. Under interest payable to the ROW, a correction is made for losses on the issue price of discounted bonds and the index-linked premiums on index-linked bonds.

The source for the *distributed income* item is Danmarks Nationalbank's settlements statistics

Danmarks Nationalbank estimates *reinvested earnings* on the basis of questionnaire surveys, which in principle cover all inward and outward foreign direct investment enterprises. The reinvested earnings on foreign direct investments in the balance of payments and in the national accounts are calculated as the difference between the surplus (profits) for the year and the dividends paid out during that same year according to the settlements statistics. This implies that Method II according to document GNIC/052 is applied.

All *property income allocated to policyholders* who are non-resident is assumed to come from non-life insurance.

Taxes on production and imports to the EU Institutions are recorded directly in central government accounts, in gross terms, before the payment of 25% of customs revenues which the Member States receive as payment for administrative services. These services are counted as exports of services.

Subsidies from the EU Institutions are recorded in central government accounts. The subsidies are related to agricultural schemes.

It is important to note that for Denmark, GNI published nationally is different from GNI used for own resource purposes. The differences are well defined and shown in table 8.1

The adjustment for illegal activity has not yet been introduced in our national publications as it is only possible in connection with a major revision. Because illegal activity is part of the production boundary in ESA95, Statistics Denmark considers the explicit adjustment to GNI for own resource purposes as a satisfactory solution in the short run.

The adjustment made for EU's third own resource is due to the fact that this contribution to the EU is recorded as a transfer to the rest of the world in our national publication. For GNI own resource purposes, this contribution is recorded as taxes on products paid directly to the EU because it is based on VAT.

The adjustment for FISIM follows directly from the Council decision on EU own resources (2000/597), according to which the allocation of FISIM to user sectors should not have an impact on GNI for own resource purposes until the Council so decides.

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

The FISIM calculation is defined in Council Regulation (EEC) no. 448/98 and implemented by Council Regulation (EC) No 1889/2002. The regulation aims at allocating FISIM to consumers, so that it is possible to distinguish between final use of FISIM and FISIM as intermediate consumption. All EU member states are obliged to implement an allocation of FISIM in the National Accounts. However, this allocation should not have an impact on GNI own resources until the Council so decides.

FISIM is exclusively produced by financial corporations, which engage in financial intermediation of loans and deposits for which the rate of interest is controlled by the financial corporations (and thus the interest margin and the earnings that they want to achieve in this way). A majority of the FISIM production takes place in banks, which continuously account for a dominant share of Danish loans and deposits. In addition to the more conventional dissemination of loans and deposits by banks and saving banks, FISIM is produced by financial corporations intermediating consumer credit and financial leasing.

The FISIM calculations are based on the reference rate method. I.e. the consumption of FISIM by each individual unit (sector or industry) is estimated as the difference between interest receivable on deposits/paid interest on loans and interest compiled using an interest reference rate. The reference rate is regarded as a 'pure' economic rate of interest i.e. exclusive any kind of risk premium or direct payment for the financial service delivered. The consumption of FISIM is estimated as the sum of FISIM on deposits and FISIM on loans:

FISIM= FISIM on deposits: (deposits*interest reference rate) – paid interest on deposits
+ FISIM on loans: (interest receivable on loans) – (loans*interest reference rate)

The *interest reference rate* is based on inter bank rates, which are estimated as the ratio between interest receivable on loans and stocks of loans between the financial corporations producing FISIM. The external reference rate is estimated in a similar way on the basis of inter bank outstanding amounts between resident and non-resident financial intermediaries.

The *breakdown to user sectors* is made directly as part of the calculation of FISIM output. Information from the Money and banking statistics together with information from the financial accounts from the Rest of the World is used. The Money and banking statistics carries information which is used for the breakdown of stocks into user-sectors (S.11 Non-financial corporations, S.12 Financial corporations, S.13 General Government, S.14 Households and S.15 NPISH)

For households and NPISH, a further division into households as final consumers, households as owners of dwellings and households in their function of unincorporated enterprises is made. FISIM allocated to the latter two functions of households are treated as intermediate consumption, whereas FISIM allocated to households as consumers is treated as final consumption expenditure.

The allocation of FISIM to *user industries* is calculated by combining two methods which are described in the regulation. It means that calculations are partly based on the stocks of loans and deposits for each industry and on the output of each industry.

2. The revisions policy and the timetable for revising and finalising the estimates

2.0 The revisions policy

2.0.1 Current revisions

Final national accounts data are calculated three years after the reference year (year $t+3$). Several versions of preliminary accounts are calculated before that. The first version is available as the sum of quarters two months after the end of the reference year, and the last preliminary version is published at the end of year $t+2$ (see table 2.3).

The reliability of preliminary national accounts figures are measured and published along with the publication of the national accounts. The difference between the real growth rate in the preliminary accounts and the final accounts is used for two measures: average deviation and bias. The average deviation shows the size of the revisions whereas the bias shows whether the revisions are systematic. A negative bias shows that the growth rate is generally underestimated in the first estimate while a positive bias shows a systematic overestimation in the first estimate.

One major explanation for the difference in growth rates is the methodology. In the preliminary accounts the calculation methods are more crude and at a more aggregated level because a short production time is important. Another explanation for differences in growth rates between preliminary and final accounts are due to revisions of primary data and the availability of more detailed data sources in the final accounts. In addition some estimates are based on assumptions or indicators in the preliminary accounts.

Table 2.1 shows main results of the revision analysis of annual growth rates for the period 1980-2002. Revisions are shown for the publication 3-4 months after the end of the year as well as for the publication 12 months after the end of the year.

In order to understand the information in table 2.1 an example for illustration can be of use: Assume that the final estimate of growth in GDP is 3,0 percent in two following years, t and $t+1$. Assume also that the preliminary estimates of growth in year t is 3,5 percent and 2,3 percent in year $t+1$. Revisions are 0,5 and -0,7 percentage points respectively in the two years. The average deviation (ignoring the sign) is 0,6 percentage points. The bias (respecting the sign) is -0,1 percentage points.

Table 2.1: Revisions of annual real growth rates 1980-2003

	First publication	Publication 12 months after the end of the year
	-----percentage-points -----	
Average deviation	0,57	0,62
Bias	-0,12	0,01
The 23 years revisions distributed according to the numerical value of the revision:	-----number of years -----	
0,0 – 0,5 pct. point	14	9
above 0,5 – 1,0 pct. point	4	10
above 1,0 – 1,5 pct. point	6	5

2.0.2 Benchmark revisions

The history of national accounts in Denmark began in the 1930'ies. The first publication took place in 1945 covering the years 1930-1944. The publication included input-output tables, and the use of input-output tables has been and still is the foundation of the compilation of GDP. Further development of the national accounts took place in the following years, and in 1947 a coverage and level of detailed was reached which was kept until the mid 1970'ies. In 1962 the results of a comprehensive revision of the years 1947- was published.

In 1968 work on the development of a new national accounts system was initiated. This included the introduction to new classifications and SNA68. A detailed supply-use system formed the core of the system. In 1973 a first result in the form of a supply-use table for 1966 was published. The regular publication started in 1978. In the coming years further developments took place beginning with preliminary accounts then institutional sector accounts and finally quarterly accounts. By the beginning of the 1990'ies a complete set of national accounts (apart from financial accounts) was available and published annually.

In 1993 a major revision of the national accounts was started. The major revision is a combination of the introduction to ESA95, revision of sources and methods, new classifications and change to 1990 as a reference year for constant price estimates. The results from the major revision was published in 1997. In 2001 the national accounts were extended by financial accounts and estimates of fixed capital (capital stock estimates).

In 2005 Statistics Denmark published the results of a benchmark revision called the "datarevision". This benchmark revision was minor in the sense that no new classifications and definitions were introduced and that ESA95 is still followed. The larger exceptions, affecting the compilation of GDP, are:

- The distribution of FISIM to users
- Foreign trade of services are now recorded gross for im- and export. Before they were recorded as net-import or net-export.
- New COFOG classifications

As the national accounts has gradually introduced new accounting statistics, the existing compilation systems were - for the larger part - unchanged. New systems were developed for the compilation of dwellings, bank services, public non-market services and the gross-recording of foreign trade in services. In other areas the revisions follow a revaluation of the compilations fx in areas of growing importance in the economy.

Table 2.2 shows the effect of the datarevision published in 2005. Table 2.2 shows the effect for the year 2000 which was the latest final year before the datarevision. The effect is split into changes due to the allocation of FISIM and other changes. As the table shows, the by far largest effect on GDP and GNI is due to the allocation of FISIM. The effect of and the methodology used for the allocation of FISIM is described in chapter 9.

Table 2.2: Effect of the datarevision in 2005 on main aggregates of supply and demand, GDP and GNI, 2000

	Previous value	New value	Change (2 - 1)	New value without FISIM revision	Change without FISIM revision (4 - 1)	FISIM revision (3 - 5)
	(1)	(2)	(3)	(4)	(5)	(6)
----- current prices, mill. kr. -----						
Imports of goods	364 409	364 390	-19	364 390	-19	...
Imports of services	122 828	159 863	37 034	157 675	34 847	2 188
Total supply	1 766 193	1 818 216	52 023	1 800 593	34 400	17 624
Private consumption	610 469	616 682	6 213	602 074	- 8 395	14 608
Government consumption	323 349	325 099	1 750	324 669	1 320	430
Gross fixed capital formation	258 085	262 879	4 794	262 879	4 794	...
Machinery and equipment	102 075	101 437	-638	101 437	-638	...
Transport equipment	32 695	32 715	20	32 715	20	...
Construction	123 315	128 727	5 412	128 727	5 412	...
Changes in inventories	10 856	11 204	349	11 204	348	...
Exports of goods	405 263	405 549	286	405 549	286	...
Exports of services	158 171	196 802	38 631	194 216	36 045	2 586
Total use	1 766 192	1 818 216	52 023	1 800 592	34 400	17 624
GDP	1 278 956	1 293 964	15 008	1 278 528	-428	15 436
Compensation of employees from the row	5 394	5 394	0	5 394	0	0
Compensation of employees to the row	5 335	5 335	0	5 335	0	0
Subsidies from the row	8 681	8 681	0	8 681	0	0
Taxes paid to the row	2 700	2 700	0	2 700	0	0
Property income from the row	90 658	90 099	-559	91 184	526	-1 085
Property income to the row	123 530	123 497	-33	124 980	1 450	-1 483
GNI	1 252 125	1 266 606	14 481	1 250 773	-1 352	15 834

Note: GNI in table 2.2 is the national published value and according to ESA95 definitions.

As a result of the revision, GDP is adjusted upwards by 15 bill. DKK and GNI by almost 16 bill. DKK in 2000. This is mainly the result of the allocation of FISIM.

The rather large increases in imports and exports are mainly related to the introduction of gross-recording of foreign trade in services. Revisions to net-exports are considerably smaller. In addition to the gross-recording of services, FISIM is now also part of foreign trade in services.

The total effect on private consumption is 6 bill. DKK in 2000. However, this reflects revisions in two opposite directions: The allocation of FISIM increases private consumption by 14,6 bill. DKK and other revisions decrease private consumption by -8,4 bill. DKK.

Government final consumption expenditure increases by 1,8 bill. DKK in 2000. Without the allocation of FISIM, government final consumption expenditure would have increased by 1,3 bill. DKK. The rather small effect at the aggregate level is covering substantial revisions at the detailed level.

Gross fixed capital formation is increased by 4,8 bill. DKK. The allocation of FISIM has no effect on gross fixed capital formation.

Property income from and to the rest of the world is affected by the allocation of FISIM because the interest concept is now exclusive the value of FISIM. It must be noted, that the net-effect of the allocation of FISIM on property income equals net-export of FISIM but with upposite sign.

2.1 Timetable for revising and finalising the accounts

Table 2.3 illustrates the revision policy (apart from benchmark revisions) for the Danish national accounts followed by Statistics Denmark from November 2001. The revision policy is announced to the users so that they always know how many periods will be revised.

Table 2.3: Revision policy of the Danish NA, from 2001

Year	Month of publishing	Year T, Q1	Year T, Q2	Year T, Q3	Year T, Q4	Year T
T	End May	P				
	Begin. July	R				
	End August	-	P			
	Begin October	R	R			
	End November	-	-	P		
T+1	Begin. January	R	R	R		
	End February	-	-	-	P	P (SQ)
	Begin. April	R	R	R	R	R (SQ)
	Begin. July	R	R	R	R	R (SQ)
	Begin. October	-	-	-	-	-
	End December					R (AP1)
T+2	Begin. January	R	R	R	R	-
	Begin. April	-	-	-	-	-
	Begin. October	-	-	-	-	-
	End December					R (AP2)
T+3	Begin. January	R	R	R	R	-
	Begin. April	-	-	-	-	-
	Begin. October	-	-	-	-	-
	End December					F
T+4	Begin January	F	F	F	F	

P: First published

SQ: Sum of quarters

R: Revised

AP1: First preliminary annual calculation

F: Final

AP2: Second preliminary annual calculation

-: Figures are published unchanged compared to the earlier published figures.

The revisions of the quarterly figures in January T+2, T+3 and T+4 are made in order to make the quarterly figures consistent with the annual figures.

3. The production approach

3.0 GDP according to the production approach

For 2003, the calculation of output-based GDP can be summarised as in the table below:

Table 3.1: GDP, production approach, 2003

	Value,	% of
	DKK million	GDP
Output at basic prices	2 353 944	168
- Intermediate consumption	1 152 877	82
+ Taxes on products	218 279	16
- Subsidies on products	18 656	1
GDP	1 400 690	100

The aggregate estimate of value added is based on an estimate at the level of the national accounts' most detailed industry grouping. The estimates for the 130 individual industries are set out in Sections 3.7 - 3.22, which explain the calculations for each of the NACE subsections. The calculations of value added up to the initial output-based estimate of GDP are for most industries at a much more detailed level, namely the DK-NACE extremely detailed grouping of 810 industries. The national accounts are balanced at the 130-industry level in the supply and use tables. Balanced values for value added divided by industry appear in the final national accounts for 130 industries in prices for the year in question, in fixed 2000 prices and as time series of Laspeyeres chain indices based on estimates in the previous year's prices.

Table 3.2 is a cross table showing value added at basic prices in 2003 by industry (NACE A17) and institutional sector.

Table 3.2: Gross value added by industry and institutional sector, 2003

Nace	Sector	Mill. DKK	Percent
A	Agriculture, hunting and forestry	S.11	5.903
		S.13	364
		S.14	15.766
B	Fishing	S.11	900
		S.14	879
C	Mining and quarrying	S.11	30.155
		S.14	63
D	Manufacturing	S.11	174.459
		S.14	6.126
E	Electricity, gas and watersupply	S.11	25.172
F	Construction	S.11	48.896
		S.13	2.268
		S.14	12.585
G	Trade and repair services	S.11	132.400
		S.14	13.801
H	Hotels and restaurants	S.11	11.832
		S.14	5.777
		S.15	-76
I	Transport, storage and communication	S.11	90.782
		S.13	290
		S.14	9.223
J	Financial intermediation	S.121	354
		S.122	37.037
		S.123	8.397
		S.124	4.475
		S.125	14.189
K	Real estate, renting and business activities	S.11	123.258
		S.13	4.299
		S.14	90.342
L	Public adm. and defence, compulsory social security	S.11	2.227
		S.13	75.377
		S.14	1
M	Education	S.11	674
		S.13	67.578
		S.14	844
N	Health and social work	S.11	7.317
		S.13	115.615
		S.14	7.414
		S.15	1.585
O	Other community, social and personal service activities	S.11	29.606
		S.13	10.477
		S.14	4.312
		S.15	6.315
P	Private households with employed persons	S.14	1.807
Total			1.201.067
			100,00

Note: Based on internal non-published information

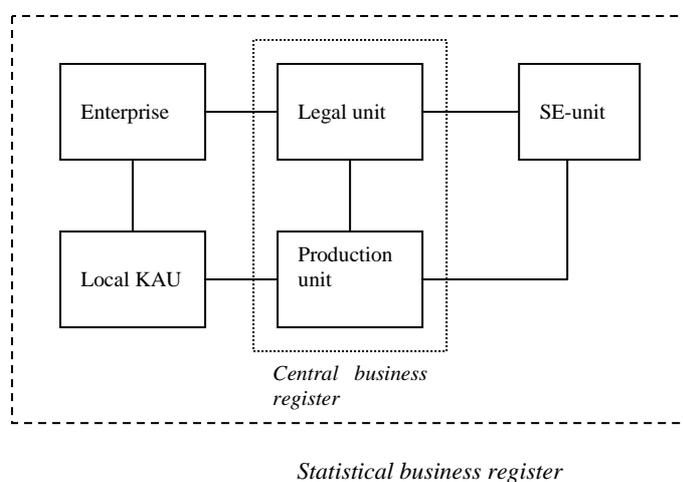
3.1 The reference framework

3.1.1 The business register

In Denmark only one Central business register exists. It is run by *Statistics Denmark*, *Skat* (Customs and Tax) and *Erhvervs- og selskabsstyrelsen* (Danish Commerce and Companies Agency).

The business register used in Statistics Denmark for statistical purposes is a copy of the Central business Register plus additional information, as shown in figure 3.1.

Figure 3.1: Business register, overview



For statistical purposes, Enterprise and Local KAU is used. The administrative units are the Legal unit and the Production unit. For VAT-purposes, the SE-unit is used.

All businesses receive a number related to the legal unit in the central business register (CVR-number) when they first register for business. In most cases, there is a one-to-one relationship between the Legal unit and the Enterprise. In some cases, if a legal unit covers more than one enterprise, Statistics Denmark decides in each case in which branches the enterprises are placed.

A legal unit can have one or more production units. The same goes for the enterprise, which can have one or more local KAUs. There is always a one-to-one relationship between the production unit and the local KAU.

The SE-unit is the level at which VAT is settled. It is possible for a legal unit to have more than one SE-unit, and therefore SE-number, and also for more than one legal unit to have only one SE-number.

All businesses have to register for VAT if their turnover exceeds 50.000 DKK during a 12 month period, which is a small amount. Registration for VAT automatically implies registration in the central business register, which therefore has a very high degree of coverage.

All administrative and statistical units are registered with the following information:

1. Identity number
2. History
3. Main and secondary branch
4. Owner and ownership-form
5. Name and address
6. Telephone number
7. Function-code which shows whether the unit is privately or publicly owned
8. Information on employment and turnover
9. Information on most recent update (when, who and what)

The central business register is automatically updated when new businesses start or old businesses close down. The above-mentioned three agencies are responsible for updating different parts of the central business register.

At the legal unit/enterprise level:

Government: *Statistics Denmark*

Private and public owned corporations: *Erhvervs- og selskabsstyrelsen*

Sole proprietorships: *Told og skat*

At the legal unit/enterprise level, *Erhvervs- og selskabsstyrelsen* can update name and address only, *Told og Skat* can update name, address and branch. However Statistics Denmark can overrule the branch.

At the production unit/local KAU level only Statistics Denmark can update the central business register.

The largest check is in relation to the so-called *Workplace Project*, which takes place once a year in November. When Told og Skat sends out information sheets to employers (to fill in information on paid wages to employees) additional information on *working places* is collected. This information is used by Statistics Denmark to update the production units/local KAUs in the central business register (among other things). When a correction is made to a production unit/local KAU, the correction is followed through to the legal unit. Often there is a one-to-one relation between the legal unit and the production unit. All cases are considered separately.

Within Statistics Denmark, the users of the business register can correct errors either directly in the central business register or via the division responsible for the business register. The users within Statistics Denmark are the producers of primary statistics.

Updates and corrections are only made in the central business register. The business register used for statistical purposes in Statistics Denmark is a copy of the central business register. Once a day Statistics Denmark gets a copy of the central business register.

3.1.2 Breakdown of the economy into sectors, sub-sectors and industries

The statistical unit for the estimate of output and value added in the ESA 95 is the local kind-of-activity unit (which in Danish is synonymous with the producer unit, the workplace). In the ESA 95, these units are grouped into industries. When discussing the estimate of GDP from the output side, it is therefore logical to proceed industry by industry. However, the primary statistics available - and thus the statistical methods relevant to use - will almost always be based on a grouping of the somewhat broader institutional units (firms) by main activity (a grouping into "sub-sectors", or "firm branches"). For example, the management of housing and business premises as part of the activity of pension funds will be subject to the requirements for the submission of accounts and statistical reporting which apply to pension fund activity, which means that all units, right down to the smallest, have to report. The letting of housing and non-residential property which is not hived off into a property company but is an integral part of the pension fund's investment activity is thus not included in the primary statistics for firms whose main activity is the letting of property. Throughout the process of estimating value added on the basis of primary statistics, we have to look out for and take account of the relationships between institutional producer units (firms) and local kind-of-activity units (producer units).

If we look at the statistical coverage of the economy in primary statistics in the form of accounting statistics, we see that there is a broad division into four sectors/subsectors:

1. Sectors with complete accounts and (virtually) full coverage of the population via administrative or statistical returns

- S.13 General government
- S.121 The central bank
- S.122 Other monetary financial institutions
- S.123 Other financial intermediaries, except insurance corporations and pension funds
- S.125 Insurance corporations and pension funds

2. Sectors with complete accounts and partial coverage of the population via administrative or statistical returns

- S.11 Non-financial corporations (other than agriculture and dwellings)
- S.14 Households (other than agriculture and dwellings)
- S.124 Financial auxiliaries

3. Sectors with a combination of physical and economic accounts

- S.11 Agriculture and dwellings where the form of ownership is non-financial corporations
- S.14 Agriculture and dwellings where the form of ownership is households (sole proprietorships)

4. Sectors with no accounting statistics

- S.15 Non-profit institutions serving households.

This breakdown is fundamental. In group 1, there is, of course, no noticeable problem with sampling or grossing up, since virtually all producer units are covered by the ongoing estimates. The challenge here is basically to convert the primary statistics' accounts to the concepts of national accounts. The exception is S.123, where most of the institutions are covered but where a certain amount of grossing up is necessary. In group 2, which covers the vast majority of activity in the economy, much of the work of producing exhaustive and reliable estimates consists in ensuring that the samples used are representative and that the figures are grossed up to the total population.

For agriculture and dwellings (group 3), one particular point is that grossing up on the basis of employment is statistically unreliable and that using VAT sales is either difficult or impossible, either because the activity includes extensive sales of capital goods or because it is not liable for VAT. A far better basis for grossing up the figures is in this case physical quantities (areas). The national accounts estimates for these two sub-sectors of S.11 and S. 14 therefore take advantage of the existence of physical data.

Finally, for Sector S.15, Non-profit institutions serving households, there are no accounting statistics, but there is an annual total estimate of wages and salaries, which is the starting point for the national accounts calculation.

Table 3.3 shows a breakdown of gross value added (GVA) 2003 by the main type of accounts statistics.

Table 3.3 Gross value added based on various accounting statistics

Accounting statistics	Gross value added based on the source	% of the gross value added of the economy
Industrial accounts statistics	650 158	54
SLS-E statistics	47 911	4
Account statistics for industries predominated by public corporations	47 375	4
Industry-specific account statistics	187 802	16
General government	267 821	22
Total	1 201 067	100

Below, the four sectors and sub-sectors are discussed individually.

3.1.3 Sectors with complete accounts and full coverage

In 2003, these sectors together accounted for 27% of total gross value added in the economy. Of the 27%, 22% covers general government and the remaining 5% Financial Institutions except financial auxiliaries.

Below are descriptions of general government (3.1.3.1), financial institutions (3.1.3.2) and publicly controlled non-financial institutions (3.1.3.3).

3.1.3.1 General government

Delimitation of the sector

In Denmark, S. 13 covers only those institutional units that are government non-market producer units. All government-controlled market producer units are considered to constitute independent institutional units. If they are not corporations, they are treated in the national accounts as quasi-corporations with autonomy of decision-making and are included in the corporate sector. For example, all local government utilities (water supply, drain service etc.) are included in the non-financial corporations sector S.11 even though their accounts are often integrated in the local government accounts.

In the Danish national accounts, therefore, the institutional sector is identical with the population of government non-market producer units. This coincidence is very useful from the point of view of both the actual calculations and the analytical uses of national accounts.

This delimitation does not result directly from ESA 95 rules. The European System of Accounts allows government market producer enterprises to be assigned to Sector S.13. There may be units owned by government which are market producers but which do not meet the requirements for autonomy of decision-making or complete sets of accounts set out in ESA 95 paragraph 2.12 in order to constitute independent institutional units, and which therefore can not be included in the corporations sector. In ESA 95, such units are counted as market producer enterprises belonging to institutional units in general government. As already stated, Denmark has consistently chosen to avoid this treatment, although it is in principle possible.

It is in practice very useful to be able to avoid having market producer units in S.13, general government, because the whole output value of S.13 is then estimated by convention from the cost side. The convention about estimating the value of the output of non-market producer units on the basis of costs places a great many constraints on the calculation systems (accounting identities) and in practice it is far easier to ensure that these constraints are met by not allowing S.13 to include both market producer units whose output value is estimated on the basis of sales and non-market units. In addition, the convention that the institutional sector for general government equals government non-market producer units is practical for the users of the figures.

A further point is that market output, where income from sales accounts for over 50% of production costs, can in fact occur - and to a large extent does occur - in S.13, but as the secondary activity of the producer units in question. The secondary market activity does not prevent total output of such producer units from being calculated from the cost side.

Those economic units which are considered to be government non-market producers but contain local kind-of-activity units that produce marked output are classified in the business register, to distinguish them from full market producers and private non-market producers, i.e. NPISHs. This classification is crucial to ensure that there are no units left out or double-counted. The business register also has ownership codes, to identify all government-owned corporations and quasi-corporations. Those units which are coded as government non-market producer units and those which are coded as government-owned market producer units are combined in the statistical system into *the public sector*, i.e. S.13, general government, and S.11001, public corporations.

Subsectors

In Denmark, the general government sector S.13 is divided into three subsectors:

- S.1311: Central government
- S.1313: Local government
- S.1314: Social security funds.

Central government comprises central government institutions, "self-owning" institutions (i.e. institutions owning their own capital – for example universities, some kinder gardens and private schools), funded and controlled by central government and the Danish National Church ("*Folkekirken*"). Under the Danish constitution, the latter has special status compared with other religious communities and unlike them receives direct funding from central government. Local government consists of *primærkommuner* (district, i.e. "municipal", authorities), *amtskommuner* (counties), "self-owning" institutions funded and controlled by local government and local government organisations. Social security funds cover the *a-kasser* (unemployment insurance funds) and *Lønmodtagernes Garantifond* (employees' wage guarantee fund).

Statistical sources

For central government, the main statistical source is central government accounts. For local government, the main source is local government accounts for all 275 municipalities and 14 counties. For the "self-owning" institutions, under both central and local government, annual accounts, assumed to cover the whole population, are collected. For the social security funds, the statistical source is their annual accounts, which are collected for all units concerned.

Links with the business register

As mentioned, the units included in the statistical system for public finance as producer units in S.13 and those units which are classified in the business register as government non-market units are exactly the same. The grouping of government units by purpose, COFOG, is only added in the public finance statistical system and not in the business register.

From primary public accounts data to national accounts statistics

The accounting plan in central government accounts is not the same as that used for local government accounts. All municipalities and counties are obliged to use the local government plan. When compiling national accounts, the accounts for central government, local government, "self-owning" institutions and social security funds are coded with national accounts classifications based on ESA95. Then they are stored in one compilation system, the *DIOR database* [*Databasen for integrerede offentlige regnskaber, i.e. database for integrated public accounts*]. All individual entries at the most detailed level of the primary accounting systems are given an ESA95 code. All entries are classified by type of transaction, by purpose and by industry.

Output of government non-market producer units

According to ESA 95, paragraph 3.53, the output value of government non-market producer units is the sum of:

- Intermediate consumption (P.2)
- Compensation of employees (D.1)
- Consumption of fixed capital (K.1)
- Other taxes on production (D.29) less other subsidies on production (D.39).

Government final consumption expenditure is calculated as follows: government income from sales (from both non-market output - "user payments" - and sales of market products produced as a secondary activity) and general government output of capital goods for own use are subtracted from output and social transfers in kind of market goods and services are added. In 2003, the only output of capital goods for own use was own-produced software. Social transfers in kind of market goods and services cover general government purchases on the market of health services (health insurance services) and facilities made available to households. These last products are not included as the intermediate consumption of non-market services by general government but are entered directly as final uses in a special category for government final consumption expenditure on market products.

Table 3.4 shows the relationship between general government output and government final consumption expenditure in 2003.

Table 3.4 Relationship between s.13 output and s.13 final consumption expenditure

	DKK million
+ Compensation of employees	252 471
+ Consumption of fixed capital	26 707
+ Intermediate consumption	117 573
+ Other taxes on production and –subsidies, net	-2 910
= Output	393 841
+ Social benefits in kind	20 075
+ Income from sales	-41 914
+ Own account software	-766
= Consumption expenditure	371 236

Breakdown of output by industry and product

In the *DIOR* database for government accounts, all producer units are recorded in terms of DK-NACE industry and COFOG code by purpose. The total output value of the general government sector is divided into the national accounts' 130 industries on the basis of the industry codes in *DIOR* which are the same as the industry codes for the units in the *CVR*.

The breakdown by product is based on the detailed *DIOR* industry codes. In 2003, general government output was divided in the national accounts product balance system over 109 products, 52 for output from various activities counted as public consumption expenditure, 56 for the corresponding public receipts from sales with uses other than public consumption expenditure and one product for own-produced software.

In the national accounts product classification, the individual products have seven characters, a letter followed by six digits. Products for government final consumption expenditure have Q as the first character. Products for public receipts from sales have S as the first character and, finally, own-produced software, like other products for capital goods produced for own account, has K as the first letter.

Intermediate consumption

DIOR contains all government accounts entries with national accounts classifications. Intermediate consumption divided into the national accounts' 130-industry grouping is obtained by simple aggregation.

Breakdown of inputs by product

The industry-level input structure for the individual general government branches was originally established for the year 1984, when the accounting plans in both central and local government accounts were considerably more detailed than in later years. The input structure established at that time was later modified, with annual balancing of resources and uses in the light of changes in supplies of the products in question and the use of products - estimated on the basis of the input target totals divided by industry - for the intermediate consumption of government non-market services.

Other taxes on production less other subsidies on production

Since the value of government non-market output is calculated from the cost side, other taxes less subsidies on production are relevant to the estimate of value added at basic prices and hence GNI. Other taxes on production in general government are calculated from government accounts, which include the necessary detail on the structure of costs.

3.1.3.2 Financial institutions

Credit institutions

The sectoral delimitation of the subsectors complies strictly with the ESA 95 rules. Subsectors S.121 and S.122 have complete accounts. For S.123, the figures are grossed up for units not covered by either the estimates of the Financial Supervisory Authority, *Finanstilsynet*, or Denmark's Statistik's financial primary statistics. The sources and methods of calculation for the two national accounts industries which correspond to subsectors S.121, S.122 and S.123 are discussed in Section 3.16.

Insurance corporations and pension funds

This subsector is covered in full by *Finanstilsynet's* accounting estimates.

3.1.3.3 Publicly controlled non-financial corporations

Delimitation of the (sub)sector

Sector S.11001, "Public non-financial corporations", along with national private and foreign-controlled enterprises carrying out activities in the same branches as the public corporations, has a special status. Industries dominated by public corporations are normally covered by special 'Accounts statistics for industries predominated by public corporations' produced by Statistics Denmark's Public Finances Division. The explanation is that it is particularly useful to cover public corporations, if only because they account for a large share of capital formation and the stock of fixed capital goods. The statistics in question are called "statistics for public enterprises", but in fact the statistics cover all producer units in the industries concerned. These are industries which have traditionally included a certain share - in many cases a dominant share - of public corporations and quasi-corporations.

The starting point is a sector delimitation of S.11001, where the units in that sector are grouped by industry in accordance with the main activity of the corporations in question. The resulting branches in which public corporations predominate are then covered in their entirety, regardless of ownership, and that coverage will not be reduced by any subsequent privatisations.

In 2003, the following industries in the national accounts' 130 grouping were included in whole or in part in the special treatment of industries where units belonging to S.11001 predominate:

401000	Production and distribution of electricity
402000	Manufacture and distribution of gas
403000	Steam and hot water supply
410000	Collection and distribution of water
601000	Transport via railways
602100	Other scheduled passenger land transport
602409	Freight transport by road and via pipelines
620000	Air transport
631130	Cargo handling, harbours, etc.: travel agencies
640000	Post and telecommunications
900010	Sewage removal and disposal
900020	Refuse collection and sanitation
900030	Refuse dumps and refuse disposal plants
920001	Recreational, cultural, sporting activities (market).

Statistical sources

For the above industries, the source for the national accounts estimate is "statistics for public enterprises", extended to cover all units in the industries in question. Section 11.1 describes these statistics. They are produced by the Public Finances Division in connection with general government statistics. As general government statistics are compiled in line with national accounts principles, the extended statistics for public enterprises are processed according to national accounts definitions and presented according to the accounting plan for non-financial corporations in the ESA 95. One of the reasons is the desire to be able to produce a national accounts estimate of the "public sector", which is a combination of general government (S.13) and public corporations (S.11001). The public sector is all producer units in the economy under public control.

Estimate of the production account by industry

Sections 3.7 to 3.23 describe the calculation of value added for the individual industries. Only the general sources and methods in "statistics for public enterprises" are mentioned, and these, as already stated, cover all industries.

- a) The accounting figures used are:
- b) central and local government accounts;
- c) questionnaires with accounting information;
- d) official annual accounts;
- e) accounting figures from branch organisations.

The population of units comes from the business register, and all public units are covered directly. All large national private and foreign-controlled units are also covered directly but small non-public units are covered via grossing up.

Ad a): If public quasi-corporations are included in central and local government accounts, these accounts are used as the source.

Ad b): For public corporations and quasi-corporations not included in central and local government accounts, Statistics Denmark collects accounting information on the questionnaire shown in Annex 6. The same questionnaire is used for national private and foreign-controlled units in the industries in question.

Ad c): Official annual accounts are used in a few cases.

Ad d): For the electricity sector, the vast majority of electricity corporations report accounting information to the branch organisation *Dansk Energi*. These figures are used as the basis for the statistics instead of the usual questionnaire, since the figures provide information on purchases and sales from one electricity corporation to another, information which is crucial if we are to be able to calculate the value of electricity sold outside the electricity sector.

The statistical unit in these statistics is the economic unit, which in practice is defined as the legal unit, the firm. For the processing, secondary activity - principally construction and civil engineering and trading - is removed from the units in which it is carried out and transferred to the relevant national accounts industries.

For a good many industries, the "statistics for public enterprises" are exhaustive, i.e. they are based on accounts for all units in the industries in question according to the business register. In other industries with a large number of small units, total activity in the industry is covered via grossing up on the basis of the industry's VAT sales. Table 3.5 lists the detailed DK-NACE industries where the statistics are used as the source for the national accounts estimate, showing whether the estimate is based on all producers' accounts or whether the figures are grossed up, together with the percentage of any grossing up.

Table 3.5 Coverage in the accounts statistics for industries predominated by public corporations

DK-NACE industry	Text	National accounts industry	% grossed up
401100	Production of electricity	401000	Nil
401200	Transmission of electricity	401000	Nil
401300	Distribution and trade of electricity	401000	Nil
402100	Manufacture of gas	402000	Nil
402200	Distribution and trade with gaseous fuels through mains	402000	Nil
403000	Steam and hot water supply	403000	Nil
410000	Collection, purification and distribution of water	410000	61
601000	Transport via railways	601000	Nil
602110	Transport via busses	602100	4
602120	Transport via interurban, suburban and urban railways	602100	Nil
603000	Transport via pipelines	602409	Nil
632130	Operation of toll bar stations for roads, bridges and tunnels	631130	Nil
621000	Air transport	620000	Only SAS
632210	Harbours (traffic and fishing harbours)	631130	10
632230	Lighthouse and pilotage activities	631130	Nil
632300	Airports etc.	631130	2
641100	National post activities	640000	Nil
900100	Collection and treatment of sewage	900010	12
900210	Collection of other waste	900020	11
900220	Treatment of other waste	900030	1
900310	Collection of refuse in public places, snow and ice clearing etc.	900020	11
900320	Decontamination of soils and groundwater	900020	22
922010	Television activities	920001	3
922020	Radio activities	920001	68
926220	Yachting harbours (marinas)	920001	25
927100	Gambling and betting activities	920001	21

In industries with no total count, those enterprises which have the largest VAT sales are extracted until appropriate coverage of the branch's total VAT sales is obtained in the sample. This form of sampling is considered to be the most efficient, especially when it is possible to gross the sample up to the total population using VAT sales instead of employment, for example. The sample is grossed up to total VAT sales in the branch.

3.1.4 Sectors mainly calculated using grossed up industrial accounts statistics

Delimitation of the sectors and sub-sectors

The following sectors/sub-sectors do not have complete or virtually complete coverage of all institutional units carrying out productive activity:

S.11002 National private non-financial corporations

S.11003 Foreign-controlled non-financial corporations

S.123 Other financial intermediaries, except insurance corporations and pension funds (minor part)

S.124 Financial auxiliaries

S14 Households

S15 Non-profit institutions serving households.

Statistical sources

In the two financial subsectors S.123 and S.124, certain units are not covered by the financial accounts statistics collected by the supervisory authority, *Finanstilsynet*, or by Statistics Denmark. For S.123, those accounts which are available for the sector are grossed up to cover all units in that sector on the basis of employment. Enterprises in S.124 are covered by company accounts also grossed up on the basis of employment to cover the total population.

In the case of NPISH, total wages and salaries are estimated on an ongoing basis. This total figure is used to gross up the account of the country's largest trade union, whose costs structure is considered to be more or less representative of non-profit institutions. In any event, trade unions are by far the most important non-profit institutions in Denmark, with membership covering a very large percentage of employees.

The remaining (sub-) sectors, i.e. non-financial corporations other than the government-controlled and the household sector (sole proprietorships and households as owner-occupiers) together account for by far the largest share of market output in the economy. As a general rule, value added is calculated from the two sets of accounts statistics, namely:

a) the industrial accounts statistics, which is by far the most important, covering for 2003 all non-financial producer units other than general government and industries where public corporations traditionally predominate and

b) "SLS-E accounts statistics", which cover the remainder of the economy, mainly certain personal service industries. This is accounts statistics based on standardised accounts (SLS-E=*Statens Ligningsystem for Erhvervsdrivende*), the government tax assessment system for businesses), which all firms, with certain exceptions, have to send in to the tax authorities together with their tax returns.

It should be borne in mind that information from the SLS-E statistics is used for the grossing up of the industrial accounts statistics as well as for compiling the industries mentioned under b) which are not covered by industrial accounts statistics.

Below the industrial accounts statistics and the SLS-E statistics and their use in the national accounts are described.

3.1.4.1 Industrial accounts statistics and SLS-E statistics

Annex 3 shows the questionnaire used for the industrial accounts statistics. Similarly, Annex 4 shows the SLS-E accounting form used to report standardised tax accounts for 2003. Annex 5 then shows the much more detailed SLS-E accounting form which was used in years 1988-1990, and whose more detailed plan is used to divide up the present more highly aggregated items into cost components.

The connection between the accounting plan in the questionnaire for industrial accounts statistics and the plan in the intermediate system is shown in table 3.15 in section 3.3.

The questionnaire for the industrial accounts statistics is designed to ensure that the accounts statistics can live up to the requirements of the Structural Business Statistics Regulation (SBS). By normal standards in this field, the degree of detail must be said to be very high. In the SLS-E statistics, there is much less detail, even when the basis is the more detailed layout which applied previously, where the structure of costs is still used for the detailed breakdowns. For the calculation of value added, the fewer details in the SLS-E statistics have no noticeable significance, but the lack of information on capital formation in this source is a handicap when it comes to the expenditure-based estimate of capital formation.

Coverage and method used for grossing up

Coverage and method used for grossing up, industrial accounts statistics

The data are based partly on the replies to the questionnaires sent to a sample of firms and partly on information from Statistics Denmark's business statistics register and from *Told&Skat*. The statistics are a legal requirement and non-response is not a serious problem. After reminders have been sent out, the response rate is as high as 97%. Non-response is usually due to death or bankruptcy. Firms which refuse to cooperate are prosecuted in accordance with the law.

From the business statistics register, information is extracted on all firms which have been active during the calendar year in question, including their branch, form of ownership and annual full-time equivalent (FTE) workforce (number of employees converted to full-time employment).

The firms are divided into groups ("strata") on the basis of their branch, form of ownership and employment. The breakdown into strata concentrates on balancing two points. On the one hand, it has to be so precise that the firms in one and the same stratum may reasonably be considered homogeneous from the accounting point of view, and on the other hand it has to be possible with the sampling method set out below to extract from each stratum as many firms as are necessary to give reliable and stable distribution figures which can be used to calculate accounting figures for the other firms in the stratum. The stratification is designed to ensure that at least five firms are selected from each stratum.

As a general rule, all firms with at least 50 FTEs are selected, 50% of those with 20-49 FTEs, 20% of firms with 10-19 FTEs and 10% of those with 5-9 FTEs. Firms with between 0 and 4 FTEs are usually not included in the sample, in order to minimise the administrative burden on very small

businesses. The sample rotates so that, over time, the burden of reporting is divided evenly over the firms in each FTE group.

For the 2003 accounting year (defined as including the account closed during the period 1 May 2003 to 30 April 2004), a sample was drawn of approximately 9 200 firms, including 2 500 manufacturing firms, 1 100 construction firms, 1 900 wholesale trade firms, 1 300 retail trade firms, 300 hotels and restaurants, 700 transport firms and 1 400 business services firms. These were all sent a questionnaire (Annex 3 shows the questionnaire). Each firm can choose either to complete and return the questionnaire or to send in specified accounts which include the same information. Around half the firms chose the latter possibility.

Pharmacists are not included in the sample. They send accounting information to *Lægemiddelstyrelsen* [the Medicinal Products Agency], which sends Statistics Denmark copies. The breakdown used for some of the items is not the same as that used in Statistics Denmark's questionnaire, but adjustments are estimated.

The accounting information received is checked and errors are corrected. Checks include ensuring that the accounts are internally consistent, as they should be, and that the information given by a firm is up to a certain point comparable with corresponding information from other firms in the same stratum and with any information given previously by the same firm. If it is considered necessary, the firm is contacted to ensure that incorrect information is corrected.

Statistics Denmark receives from *Told&Skat* copies of the standardised accounting information which corporations and the self-employed have to send in to the tax authorities and which is recorded in a special computerised register system (SLS-E). In addition to purely fiscal information, around 20 major items are reported from each firm's profit and loss accounts and balance sheets. Some firms, however, including those with annual turnover below DKK 0.5 million, companies quoted on the stock exchange and ordinary partnerships, do not have to report to the SLS-E. These "tax accounts" are the main source for the "SLS-E statistics", but are also important input for the industrial accounts statistics.

In addition to the firms included in the sample to which Statistics Denmark sent questionnaires, in 2003 accounting information was received from the SLS-E statistics covering around 67 900 firms, including 8 600 manufacturing firms, 14 200 construction firms 13 000 wholesale trade firms, 11 500 retail trade, 4 700 hotels and restaurants, 6 400 transport firms and 9 500 business service firms.

The aim of the processing is to produce accounting figures in the degree of detail on the questionnaire for each individual firm whose main activity is in manufacturing, construction or retail trade and which has been active during the calendar year.

The processing is in stages:

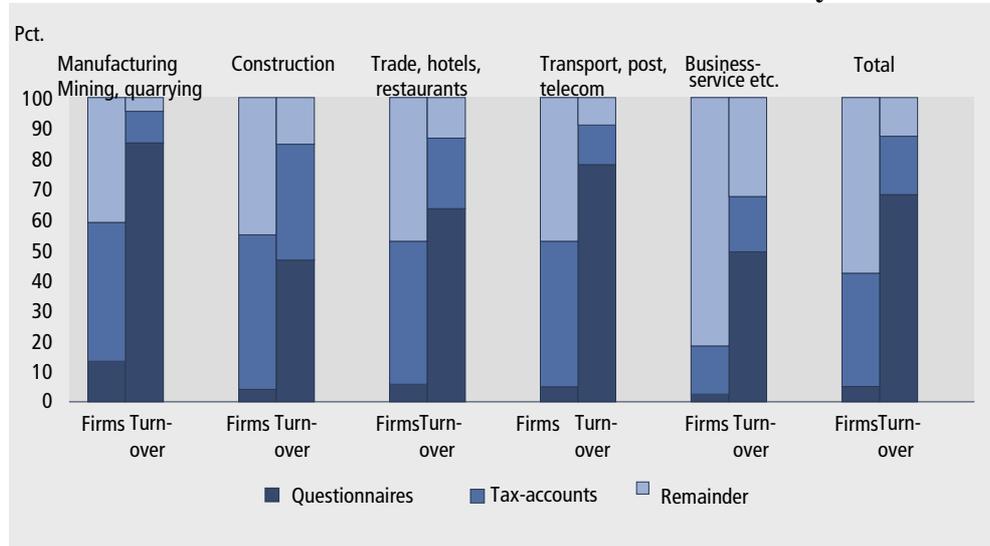
- 1) From the information reported at questionnaire level by the firms selected for the sample, distribution figures are worked out for each stratum, to be used to calculate accounting items for those firms for which only SLS-E statistics is available - cf. point 2.
- 2) In the case of those firms for which only SLS-E statistics is available, the main profit and loss items from that information are "frozen" for each individual firm and the extra

accounting items included on the questionnaire are imputed from stratified distribution figures based on those firms which have reported on the questionnaire.

- 3) On the basis of the above two groups, accounting figures are then calculated for each stratum per FTE for each accounting item on the questionnaire. The calculations are corrected for items such as the owners' input of labour in firms which are personally owned. These accounting figures are used to calculate the figures for the remaining group of firms which have to be included in the statistics but where only the branch, form of ownership and number of FTEs, VAT-liable turnover and duty on wage and salary cost are known. The turnover of firms with more than one FTE is mainly estimated on the basis of the number of FTE. When the number of FTEs in a firm is not more than one FTE, from the year 2000 and onward, another method is used, since FTE in the above calculations is replaced by turnover. The turnover for firms belonging to the remainder group with not more than one FTE is calculated based on these firms VAT-turnover or duty on wage and salary cost. This remainder group consists of around 105 800 firms, including 7 800 manufacturing firms, 12 600 construction firms, 9 800 wholesale trade firms, 11 200 retail trade firms and 49 200 business service firms. Virtually all of them are fairly small, for instance, approximately three-quarters of them have no paid employees.

The "questionnaire firms" account for 69% of turnover, "SLS-E firms" for 19% and "remainder group firms" for 12%.

Figure 3.2 Degree of coverage in the industrial accounts statistics. Number of firms and their turnover divided by source



As Figure 3.2 shows, Statistic Denmark's new industrial accounts statistics have extremely high coverage in the form of accounts which are actually observed. This is due to the combined use of questionnaires and the SLS-E tax accounts. One characteristic of manufacturing, transport, postal services and telecommunications is that the great majority of activity is carried out in firms with 50 or more employees, which all receive a questionnaire from Statistics Denmark. In non-manufacturing, small and medium-sized firms are much more important and the SLS-E tax-

accounts therefore carry considerably greater weight in the total accounting figures underlying the accounts statistics.

Taking together the main groups of industry which in 2003 were covered by the industrial accounts statistics for the Structural Regulation, only 12% of turnover has to be imputed. This high degree of coverage is achieved without sending questionnaires to firms with fewer than five annual FTEs, i.e. attaching great importance to not overburdening small-business respondents.

Coverage and method used for grossing up, SLS-E statistics

The main basis for these statistics is the standardised accounting information which corporations and the self-employed have to report to the tax authorities and which is recorded in a special computerised register system, *Statens LigningsSystem for Erhvervsdrivende* (SLS-E).

The reporting unit is the firm, i.e. the legal unit, as determined by form of ownership, i.e. corporations with share capital, private companies, cooperative associations, partnerships or sole proprietorships.

The obligation to submit returns took effect with the 1986 income year. Since then, various restrictions have been introduced, some reducing the amount of detail required and some cutting back the number of firms obliged to report.

The most important exemptions from the reporting obligation are:

- firms with net turnover below DKK 500 000 in the current or previous income year;
- companies quoted on the stock exchange;
- partnerships;
- financial intermediation [commercial and savings banks], and
- firms which started up or ceased trading during the income year.

The basic data for 2003 include SLS-E information on around 10 000 firms.

For industries not covered by industrial accounts statistics, Statistic Denmark's National Accounts Division receives from the Primary Statistics Division complete accounting figures at the level of individual firms (around 10 000 accounts) and then stratifies and grosses up the figures for national accounts purposes in its own calculation systems.

For this grossing up, the General enterprise statistics² is used, where VAT turnover are aggregated/split into legal units, i.e. firms, the units in the SLS-E statistics. VAT legislation allows firms/company groups to elect to remit VAT at a unit level which is either lower or higher than firm level. The two arrangements are called "partial registration" and "joint settlement". By far the most common option is for firms to register a special unit for their export sales, since they thus gain a liquidity advantage. In the General enterprise statistics (as in ordinary VAT statistics), these partial registrations are netted out and, in addition, units which settle VAT jointly are split into the individual firms.

² The General enterprise statistics integrate information from three other business statistics, which are compiled for different unit types. The three statistics comprise the Accounts statistics, which are compiled at the enterprise level, VAT statistics, which are compiled at the administrative level used by the Danish Central Customs and Tax Administration, and Establishment-related employment statistics, which are compiled at the local kind-of-activity level. The different unit types imply, that results from the three statistics are not strictly comparable. This is counterbalanced by the General enterprise statistics as the information is processed to the same unit level, the enterprise.

The accounting figures are stratified in the national accounts grossing-up by detailed DK-NACE industry, the institutional sector of the firm (S.11 or S.14) and two size groups measured in terms of VAT turnover. Within each DK-NACE industry, firms are split into four groups: a) large corporations, b) small corporations, c) large firms which are sole proprietorships and d) small firms which are sole proprietorships. "Large" and "small" are defined by reference to the median sales of corporations/sole proprietorships respectively in the General enterprise statistics. For each individual firm in the SLS-E accounting figures, the appropriate VAT turnover are obtained by matching with the General enterprise statistics register at firm number level. In this context, partnerships are classified as corporations, in accordance with the national accounts sectoral delimitation.

The figures for each stratum are grossed up by calculating the ratio:

$$A = \frac{\text{VAT turnover in the population in the stratum}}{\text{VAT turnover in firms in the accounting figures in the stratum}}$$

This "A ratio" is then used as the grossing factor for the aggregated firm accounts within the stratum, to gross the figures to the total population. One advantage of this grossing procedure is that the "net turnover" in the accounts, which correspond to turnover in the national accounts sense, are grossed up using VAT turnover as the raising variable. Experience has shown that net turnover and VAT turnover correlate very closely.

Periodisation

Periodisation, industrial accounts statistics

In the case of enterprises covered by the questionnaire survey, the statistics for year t cover firms whose accounting year closes between 1 May of year t and 30 April of year t+1. Firms whose SLS-E form is used for the statistics are included for year t if they close their accounts between 1 April of year t and 31 March of year t+1.

Questionnaire-based sales figures for 2003, broken down by month, are shown in Table 3.6. If the main groups of industry covered are looked at as a whole, the 2003 distribution of sales would appear in itself to indicate a slight difference compared with the calendar year (minus just below one month). But the figures include a number of firms which were not operating throughout the year and which therefore tend to shift the average accounting year forward. The opposite case, namely firms which cease trading, is not included in the sample, for obvious reasons. Overall, the accounts statistics' questionnaire-based figures must be considered a good approximation to a calendar-year-based estimate.

Table 3.6 Closing month for accounts in the accounts statistics questionnaire-based survey

Month when accounts close	Number of firms	Sales
January	16	3.812.165
February	14	3.860.105
March	147	30.526.194
April	463	61.945.159
May	87	15.608.375
June	990	105.269.689
July	24	7.447.057
August	49	43.659.339
September	847	133.272.032
October	55	43.462.302
November	27	6.126.771
December	6.125	1.036.378.524

These statistics are not periodised for use in national accounts. For one thing, they are considered to approximate closely in practice to a calendar-year estimate, and for another there are two factors which speak against any attempt to produce an absolutely exact calendar year periodisation of accounts statistics. Firstly, there are a good many SLS-E forms on which the accounting period is not stated, and secondly more accurate periodisation would require accounts for both year t and year t+1 to be available when statistics for year t were produced, which would delay the calculation of the final national accounts.

For that share of the figures which comes from SLS-E forms, the breakdown of turnover by month when the accounting period ends is not known, since a good many firms have not filled in the accounting year box on the SLS-E form. Whilst the firms in question might possibly all have calendar-year accounts, this hypothesis would seem unlikely. For firms covered by the SLS-E, the accounting period for the accounts included is one month different from the period for the questionnaire-based firms.

If we take as the basis the known distribution by month of sales in the manufacturing, construction and retail firms covered by the questionnaire, as shown in Table 30, then the difference in the accounting period compared with the questionnaires would appear on the face of it to indicate a considerably larger shift away from the calendar accounting year in the SLS-E figures than in the questionnaire figures. However, we know from a survey for the 1987 accounting year that small and medium-sized firms are more likely than large firms to have calendar-based accounting years. Since it is mainly small and medium-sized firms which are covered in the statistics by SLS-E accounts, it may be assumed that the periodisation of the SLS-E share of the figures is in practice closer to the calendar year delimitation than Table 30 - viewed in isolation - would suggest.

As was the case with the questionnaire part of the accounting figures, it is also true that new firms which have calendar year accounts exert a pull in the opposite direction to the (slight) deviation compared with the calendar year which is indicated by the 31 March cut-off date for the accounts included.

Periodisation, SLS-E statistics

As is the case with the industrial accounts statistics, the cut-off date for the accounts which are included in the statistics, viewed in isolation, exerts a pull towards the previous calendar year in the

estimate of activity. However, this must be seen against the effect that new firms have on the accounting figures, which would normally lead to a shift forward in time compared with the calendar year.

It may be assumed that many new enterprises which have not been in operation throughout the year send in the SLS-E accounting form even though they are not obliged to do so, since the SLS-E accounts tie in so closely with the income tax returns of corporations and sole proprietors that they are in many cases filled in along with the income tax returns, purely as a matter of course - especially when firms of auditors are involved. For new enterprises with calendar year accounts, which are the most common, the inclusion of accounts for the first year of operation - on average, approximately the last six months' sales - in the calendar year in question will shift the average accounting period away from the calendar year. In this connection, new enterprises do not just mean "new economic activity". They may also be formed from the restructuring of established firms and company groups. There is no information available on the size of the amounts involved.

In view of the above two opposing shifts in the SLS-E figures compared with the calendar year, it was decided not to periodise the statistics. The view is taken that the accounts included in the statistics are, overall, the best possible estimate of the accounts on a calendar year basis. No more exact periodisation is possible, since a substantial share of the firms involved, as already mentioned, do not complete the accounting period field on the SLS-E accounting form.

There is also the practical point that accurate periodisation would require statistics for both year t and year $t+1$ to be available when the statistics were worked out for year t , and this would delay the estimate of the final national accounts.

3.1.4.2 National accounts processing of the grossed up industrial accounts statistics, consistency check and transition from firm branches to national accounts industries

Industrial accounts statistics received from primary statistics

In 2003 Industrial accounts statistics covers DK-NACE industries 140000-370000, 450000-550000, 602223-640000, 701109 and 710000-740000³. Within these areas, industrial accounts statistics covers firms, where the labour input is at least half the full year's work for one person⁴. In comparison with the 1995-situation described in the previous Danish GNP documentation this is a considerable extension to the coverage of service industries.

The population in the industrial accounts statistics is based on a business register extract from November 2003, plus units which were not found on the date when the data were extracted, but which were active during 2003.

The industrial accounts statistics is received from the Business Structure Division in three parts:

³ For years 1995 to 1997, the statistics covered DK-NACE industries from 140000 to 370000, construction industries from 451100 to 455000 and retail trade and repair industries from 521110 to 527490. In 1998 wholesale trade, 510000, was included and in 2001 also air transport, 620000, and telecommunication, 640000, were included here. As a consequence these industries were removed from accounts statistics for publicly owned or controlled units.

⁴ Industrial accounts statistics covered fewer industries from 1995 to 1998, but in these earlier years it had exhaustive coverage within the industries actually covered, which means that all enterprises which had been active during the calendar year were included.

- a firms file, which includes accounting information for firms with a firm branch within the industries covered;
- a workplace file, which consists of accounting information for workplaces (producer units) with kind-of-activity unit codes within the industries covered;
- a file with summary information on workplaces with kind-of-activity industries which are not covered by accounts statistics but which belong to firms with a firm branch within the scope of accounts statistics, referred to below as the "remainder file". This contains only information on the JUR number/workplace code, kind-of-activity industry, firm branch and FTEs for the workplaces in question.

The three parts are set out in Figure 3.3.

Figure 3.3: Overview of the coverage of workplaces in files from primary statistics

Workplace Firm	Workplaces within the scope of the accounts statistics	Workplaces outside the scope of the accounts statistics
Firms within the scope of the accounts statistics	1. Go into the firm file Go into the workplace file	2. Go into the firm file Go into the "remainder" file
Firms outside the scope of the accounts statistics	3. Go into the workplace file (FBRUDE units)	4.

Logically, it is the firms and workplaces in areas 1 and 2 which together make up the industrial accounts statistics supplied to the intermediate system in terms of both firms and workplaces. Area 3 includes workplaces which belong to firms outside the scope of the industrial accounts statistics, typically those which belong to the SLS-E system. In the case of these workplaces the information which can be compiled in the industrial accounts statistics system is considered more reliable than the information that can be found in SLS-E statistics. To avoid inconsistencies with the breakdown of the firms in question in the tax accounts statistics system, the accounting information calculated here is removed from the SLS-E system's firm-level information before the remainder is broken down by kind-of-activity branches outside the scope of the industrial accounts statistics. The units in question are called, technically, FBRUDE, which is explained later. However the number of such units has been significantly reduced since 1999 as the scope of the industrial accounts statistics has been widened to include most of the market production in service industries. In principle, area 4 should be blank. If there is anything here, it is because the branch allocation of some of the accounts statistics workplaces has been corrected.

The firm file contains the most information, with only the county and municipality codes omitted. Of course balance sheet items and items for property income transactions are missing from the workplace file, but information on wages and salaries etc. and indirect production costs is also missing from this file. Table 3.7 below shows which items occur in each of the files when they are received from the Business Structure Primary Statistics Division. The right-hand side of the table shows the MLS [intermediate system] code in those cases where the items translate directly to this coding.

Table 3.7 Industrial accounts statistics at firm level and workplace level

Label	Variable	# in firm record	# in workplace record	MLS-code	MLS-text
CVR number (also in "remainder")	CVRNR	1	1		
Workplace number(also in "remainder")	ARBNR		2		
DB93 branch (also in "remainder")	BRANCHE	2	4		
9-branch code	BRA009	3	5		
27-branch code	BRA027	4	6		
53-branch code	BRA053	5	7		
111-branch code	BRA111	6	8		
Firm's main branch (also in "remainder")	F_DB93		9		
Ownership code	VIRKFORM	10	10		
Combination code	KOMB	13	10		
County code	AMTKOD		12		
Municipality code	KOMKOD		13		
Post district	POSTNR		14		
Road code	VEJKODE		15		
Accounting period	PERIOD	14			
Record entry code	JKOD	15			
FTEs (also in "remainder")	VAERK		16		
FTEs	AARSV	16			
Number of employees	BESK	17			
Sales	OMS	18	17		
Own-account work	AUER	19	18	1012	Manuf. of plant and machinery for own use
Other operating income	ADR	20	19	1019	Other, secondary operating income
Changes in inventories (including holding gains)	DLG	21	20		
Purchases of goods, ancillary materials and packaging	KRH	22	21		
Purchases of energy (excluding running of vehicles!)	KENE	23	22	2013	Purchases (consumption) of fuel and power
Purchases of processing to order	KLOE	24	23	2014	Purchases of processing to order and subcontracting
Rental expenditure	UDHL	25		7020	Expend. on rentals excluding heating
Acquisitions of equipment etc. expensed	UASI	26		7025	Acquisitions of equipment etc. expensed
Temporary employment agencies	UDVB	27		7042	Temporary employment agencies
Operational leasing	ULOL	28		7024	Operational leasing
Losses on ordinary bad debts	OTDE	29		7026	Losses on ordinary bad debts
Other external expenditure (incl. running of vehicles)	EKUD	30		7042	Other external expenditure
Wages and salaries	LGAG	31		4015	Wages/salaries & employer contribs.
Expenditure on pensions	PUDG	32		4016	Expenditure on pensions
Other expenditure on social security	AUDG	33		4017	Other staffing expenditure
Writing off and writing down of tangible and intangible assets	ANMI	34		5100	Writing off and writing down of non-financial fixed assets
Writing down of current assets	NOAK	35		5200	Writing down of non-fin. current assets
Secondary expenditure	SEUD	36		7060	Other operating expenditure
Profit/loss before financial and extraordinary items	RFEP	37			
Income from lasting interests	INKI	38		4030	Income from lasting interests
Other return on financial fixed assets	UDFA	39		4032	Other interest and dividend income
Interest etc. received from financial fixed assets	RIFA	40		4032	Other interest and dividend income
Interest etc. received from current assets	RIOM	41		4031	Interest etc. rec. from current assets
Writing down of financial fixed and current assets	NFAO	42		5300	Writing down of financial assets

Interest paid etc.	RUDG	43		4040	Interest paid
Extraordinary income	EOI	44		1060	Extraordinary income
Extraordinary expenditure	EOU	45		7061	Extraordinary expenditure
Annual pre-tax profit/loss	ARFS	46			
Corporation tax on annual profit/loss	SSAR	47		4041	Corporation tax
Annual profit/loss	AARE	48		4043	Profit/loss for tax purposes
Consolidation, i.e. trans. to/from equity	KEGN	49			
Dividends	UDBY	50		4044	Distributed income
Intangible fixed assets, total	IAAT	51		8110	
Land and buildings	GRBY	52		8120	Land and buildings
Technical plant and machinery	ATAM	53		8121	Technical plant and machinery
Other plant, machinery and equipment	AADI	54		8122	Other plant, machinery and equipment
Advance payments and tangible fixed assets etc.	FMAA	55		8129	Other tangible fixed assets (e.g. advances)
Tangible fixed assets, total	MAAT	56			
Amounts outstanding	TILG	57		8130	Financial fixed assets
Holdings of shares and equity	ABAE	58		8130	Financial fixed assets
Holdings of bonds and other securities	ABOA	59		8130	Financial fixed assets
Financial fixed assets, total	FAAT	60		8130	Financial fixed assets
Fixed assets, total	AAT	61			
Raw materials, ancillaries, fuel and packaging (opening stocks)	PRHB	62	24	5060	Opening stocks of raw materials
Raw materials, ancillaries, fuel and packaging (closing stocks)	URHB	63	25	6060	Closing stocks of raw materials
Work in progress (opening stocks)	PVUF	64	26	5065	Opening stocks of finished goods
Work in progress (closing stocks)	UVUF	65	27	6065	Closing stocks of finished goods
Manufacture of finished goods (opening stocks)	ELPR	66	28	5065	Opening stocks of finished goods
Manufacture of finished goods (closing stocks)	ELUL	67	29	6065	Closing stocks of finished goods
Goods for resale (opening stocks)	HLPR	68	30	5061 / 5062 /	Opening stocks of goods for resale
Goods for resale (closing stocks)	HLUL	69	31	6061 / 6062 /	Closing stocks of goods for resale
Advance payments, purchased goods (opening stocks)	PFKV	70	32		
Advance payments, purchased goods (closing stocks)	UFKV	71	33	8149	Other current assets
Total inventories of goods (opening stocks)	PVBT	72	34	8141	Opening stocks
Total inventories of goods (closing stocks)	UVBT	73	35	8142	Closing stocks
Amounts outstanding from sales of goods and services	TSVT	74		8149	Other current assets
Work in progress on account of others	UIAF	75		8149	Other current assets
Other claims	ANTI	76		8149	Other current assets
Total claims	TGT	77		8149	Other current assets
Holdings of shares and equity	OBAE	78		8149	Other current assets
Holdings of bonds and other securities	OBAV	79		8149	Other current assets
Liquidity holdings	LIBE	80		8149	Other current assets
Securities and particip. interests, total	VKT	81		8149	Other current assets
Total current assets	OMAT	82		8149	Other current assets
Total assets	AT	83			
Equity, closing stocks	EGUL	84		8210	Equity
Provisions	HENS	85		8220	Provisions
Long-term debts to suppliers	LGL	86		8230	Long-term debts
Other long-term debts	ALG	87		8230	Long-term debts
Short-term liabilities to suppliers	KGL	88		8240	Short-term liabilities
Other short-term liabilities	AKG	89		8240	Short-term liabilities
Total liabilities	PAST	90			
Intangible fixed assets (additions)	TIAA	91		6102 / 6110	Software bought in/purchases of intang. assets, other and unspecified

Purchases of existing buildings (including land value)	KEB	92	36	6121	Purchases of existing buildings (including land value)
Construction expenditure, new building (excluding land)	OPNY	93	37	6123	Construction of new buildings (excluding land value)
Purchases of unbuilt land	KUBG	94	38	6122	Purchases of unbuilt land
Rebuilding and improvements to buildings and installations	OFBB	95	39	6124	Rebuilding and improvements to buildings
Roads, ports, open spaces, etc.	VHPK	96	40	6125	New layout and rebuilding of roads, ports, etc.
Total real estate (additions)	FET	97	41		
Technical plant and machinery (operating equipment)	DTAM	98	42	6134	Purchases of plant and machinery, other and unspecified
Other plant, machinery and equipment (additions)	TAAD	99	43	6134	Purchases of plant and machinery, other and unspecified
Total plant and machinery (additions)	TDRT	100	44		
Plant and equipment under construction	TFMA	101	45		
Total additions	ATIT	102	46		
Of this: Investment in plant and equipment for pollution control	IAFK	103	47		
Intangible fixed assets (disposals)	AIAA	104		6202	/ Disposals of software/intangible assets, other and unspecified
Sales of buildings (including land value)	SABY	105	48	6210	Sales of existing buildings (including land value)
Sales of unbuilt land	SUBG	106	49	6222	Sales of unbuilt land
Sales of roads, ports, open spaces, etc.	SVHP	105	50	6223	Sales of roads, ports, open spaces, etc. (including land value)
Total real estate (disposals)	FEGT	108	51		
Sales of technical plant and machinery	STAM	109	52	6234	Sales of plant and machinery, other and unspecified
Sales of other plant, machinery and equipment	SADI	110	53	6234	Sales of plant and machinery, other and unspecified
Total plant and machinery (disposals)	ADRT	111	54		
Total disposals	AFAT	112	55		
Sales of own products	EOMS	113	56	1018	Other and unspecified net sales
Sales (goods for resale)	HOMS	114	57	1016	Sales of goods for resale
Purchases of raw materials, ancillaries and packaging	RKOB	115	58	2015	Other and unspecified purchases (consumption) of raw materials
Purchases (goods for resale)	HKOB	116	59	7019	Goods for resale, purchases
Real estate (financial leasing)	FLFE	117			
Technical plant and machinery (financial leasing)	FTAM	118			
Other plant, machinery and equipment (financial leasing)	FADI	119			

For the processing of the accounts statistics, it was decided to retain all information on the individual firms and workplaces up to the stage at which the processed statistics are put into a form such that they can be input into the intermediate system. The format and coding from the accounts statistics are also retained until this stage, to ensure that no information which might later be utilised for other purposes is lost. This means, for example, that the geographical coding in the processed accounts statistics could be used to compile regional accounts.

National accounts processing of the industrial accounts statistics

National accounts processing, correcting the workplace and firm file

The logical first stage in the processing is to input corrections to the records for firms and workplaces which are received from the Primary Statistics Division. All the figures in records from firm, workplace or remainder files can be corrected at this stage, and in practice most of the system for processing the accounts statistics will usually be run through a few times, as problems are identified and corrected.

National accounts processing, collection of firm and workplace information

For both firms and workplaces, a few items are calculated which were not originally in the files: opening and closing stocks of finished goods and approximate production value and acquisitions of buildings (the latter for use with the breakdown of various figures from the firm information into workplaces). In addition, the firm file information on the firm branch is moved to variable F_DB93, so that this variable overall indicates the firm branch. These items are kept in the files throughout the further processing.

Table 3.8: Items calculated to supplement the accounts statistics files

Label	Variable	# in the firm record	# in workplace record	MLS-code	MLS-text
Manufacture of finished goods and work in progress (opening stocks)	PFFV	New	New	5065	Opening stocks of finished goods
Manufacture of finished goods and work in progress (closing stocks)	UFFV	New	New	6065	Closing stocks of finished goods
Approximate production value	PROD	New	New		
Acquisitions of buildings, total	ABYGN	New	New		

The workplace file is divided into one part which has a firm in the firm file (i.e. where the firm to which the workplace belongs has a firm branch within the scope of the industrial accounts statistics) and a part which has a Firm Branch outside (UDE) the firm file (FBRUDE part). For example, a manufacturing producer unit (workplace) belonging to a firm whose main activity is fire- and ambulance services occurs in the FBRUDE part. This is because fire- and ambulance service is not covered by the industrial accounts statistics.

The firm file is matched with the file that contains workplaces which has the firm branch covered by accounts statistics. The remainder of the firm file, which ought to consist of workplaces outside the scope of the industrial accounts statistics, is calculated as a residual, as the firm data minus the sum of workplace data for the same firm. Records with suspect residuals are printed out. Prior to the comparison, various workplaces (mainly independent cooperatives) have to be combined into a joint CVRNR, which is used in the firm file for these units. A file with these workplaces is received every year from the Business Structure Division (primary statistics), but the original CVRNR is also kept in the record.

The firm file remainders which are not found in the workplace file are matched with the "remainder" file from the primary statistics division. Those firm remainders which are not found here are printed out so that we can decide whether the firm information needs to be corrected. Once we have considered all cases where workplaces have a corresponding combined CVRNR in the firm

file, the remainder are mainly random differences with sales = 0. Conversely, we look for remainder workplaces which do not have a corresponding firm remainder. These are usually units with no FTEs - or very few. Warnings are also printed out if the firm file remainder has a number of FTEs which is different from the same firm's FTEs according to the "remainder" file, or if the firm's remainder sales are negative or the figure is otherwise suspect.

A test is made to detect cases where the firm's sales are lower in the firm statistics than in the workplace statistics. In such cases, it has mostly been the workplace figures which are the most credible. Cases of conflicting economic data may also come to light, along with cases where workplaces which has changed owners during the period come up several times under different CVR numbers.

It is important when compiling the final national accounts to establish the correct relationships between firms and the workplaces which belong to them, partly because many of the firm statistics items have to be divided up over workplaces and partly because - as was shown clearly during the work on the files - a number of errors are revealed during the process, often relating to some of the country's larger company groups. In 1995 when the statistics was new the number of errors that needed to be corrected was significant. Since then the problem has been diminishing.

Once input data have been corrected for obvious major errors, economic magnitudes can be allocated to the "remainder" file's workplaces. Where a firm has more than one "remainder" workplace, the figures calculated as residuals are divided up by unit on the basis of the FTEs in the "remainder" file. These workplaces are the accounts statistics' contribution to the intermediate system's industries outside the scope of the industrial accounts statistics (disregarding any subsequent corrections to the branch allocation of workplaces).

National accounts processing, recoding of workplace industries which conflict with firm branches

A check is made to reveal contradictory industry coding for units belonging to the same firm in firm- and workplace files. Even though in such cases it would have been less complicated to use the workplace file's branch coding, the firm file's branch coding can usually be assumed to be the more accurate and the one that most closely tallies with the industrial commodity statistics. The following checking and correction procedure is therefore carried out.

The branch coding in the firm file is checked for a match with the file with workplaces which have a firm branch covered by the industrial accounts statistics. On the basis of the workplace file, figures are worked out for kind-of-activity units, and for each firm (CVRNR) information is compiled on the composition of output value by DK-NACE industry (here, the variable previously worked out for approximate production value is used). The workplace information is combined with the firm file information. If a firm consists of a single kind-of-activity unit, the firm branch is transferred as the workplace branch for all the firm's workplaces. This is the most common situation. In other cases with conflicting branch coding, the workplace branch is corrected for the workplaces in the largest (or next largest) kind-of-activity unit if this is sufficient to produce consistency. In more complicated cases, automatic corrections of the industry allocations cannot be justified. Checklists are printed out, showing the firm with the breakdown by workplace before and after recoding. Where automatic recoding is considered improbable, the input data are instead corrected manually.

The problem with conflicting branch allocation in the firm and workplace files was - like other running-in problems - much greater in 1995 than in the following years.

National accounts processing, breakdown of firm entries by workplace

Some of the items for which there is information in the firm file only are considered in the national accounts to be workplace-related. These items are distributed over the firm's workplaces. Before that distribution, steps are taken to reconcile various items which occur in both the firm and the workplace files and which are to be used during the later calculation process. At this stage in the calculation it is assumed that the input data are corrected so that firm items can be calculated as the sum of the items for the workplaces which belong to them.

The following items are added to the workplace file:

Table 3.9 Accounting items divided over workplaces belonging to a given firm

Label	Variable	# in firm record	Divided up/grossed up in workplace record, preferably <i>pro rata</i> with:
Accounting period	PERIOD	14	Transferred
Record entry code	JKOD	15	Transferred
Number of employees	BESK	17	VAERK
Rental expenditure	UDHL	25	PROD
Acquisitions of equipment etc. expensed.	UASI	26	PROD
Temporary employment agencies	UDVB	27	PROD
Operational leasing	ULOL	28	PROD
Ordinary losses, bad debts	OTDE	22	OMS
Other external expenditure (including the running of vehicles)	EKUD	30	PROD
Wages and salaries	LGAG	31	VAERK
Expenditure on pensions	PUDG	32	VAERK
Other expenditure on social security	AUDG	33	VAERK
Acquisitions of intangible assets	TIAA	91	TDRT
Disposals of intangible assets	AIAA	104	ADRT
Total expenditure on financial leasing in the accounts	RSUF	109	PROD
Real estate (financial leasing)	FLFE	110	ABYGN
Technical plant and machinery (financial leasing)	FTAM	111	DTAM
Other plant, machinery and equipment (financial leasing)	FADI	112	TAAD

The calculation is in two stages, the first for those workplaces which belong to firms within the scope of the industrial accounts statistics. Here, the work consists in dividing up the entries relating to the individual firm among the firm's workplaces. Wherever possible the figures are distributed proportionally with the above-mentioned variables. If any of these variables is empty or zero and is therefore not suitable for breakdown, the program will use default solutions such as a distribution based on sales or FTEs. Checks are also made to ensure that no impossible figures arise, such as negative consumption of raw materials or goods for resale.

The missing items are then added to those workplaces which belong to firms outside the scope of the accounts statistics (FBRUDE units), wherever possible on the basis of the ratios in the supplemented workplace records belonging to the same DK-NACE industries. The workplaces are

allocated a share of the item which is used as the basis for the comparison, corresponding to the average from the records completed earlier for non-FBRUDE workplaces. Default solutions are used here, too, if the preferred basis for comparison is not available. If calculation based on the DK-NACE industry is impossible because the branch contains only FBRUDE workplaces, a comparison with the workplace's NR130 branch is used for the calculation instead.

National accounts processing, when trading activity is included

During the above stages, records are completed for all the accounts statistics workplaces. This edition of the workplace statistics cannot be transferred directly to the intermediate system, since trading activity is still scattered around in DK-NACE industries other than trade⁵.

Each workplace outside the trade industries is now broken down into trade and other activity on the basis of the entries for trade sales and purchases and for opening and closing stocks of goods for resale. These are transferred in full to the trade part. A share of intermediate consumption is also transferred, along with shares to the BESK-, OTDE-, LGAG-, AUDG-, PFKV- and UFKV- as well as PRHB- and URHB- variables. Here, it is only the last two, opening and closing stocks of raw materials, which have any importance for the figures used during later stages.

The file with trade included, broken down into DK-NACE industries, is retained. For use in the SLS-E system and the intermediate system, a file is set up in which the trade included is as a rule recoded to branch 510008, but trade in branch 158120, bakers' shops, is allocated to branch 522410, sales of bread.

A new workplace file is set up, consisting of workplaces from which the trade element has been removed + the trade element separated out with a breakdown by workplace.

National accounts processing, grossing up for enterprises below threshold.

Since the statistics-year 1999 the Danish business register contains a marking of small firms – either firms which counts as hobby or inactive firms - which makes it possible to separate regular economic active firms in accordance with the recommendations of EU. The recommendations are that the statistics should cover only firms, whose labour input is at least half the full year's work for one person. The effect of the criteria is that in 1999 about 220.000 firms out of roughly 500.000 firms were marked “small, inactive”. The turnover of these firms was in 1999 about 6 billion DKr. corresponding to 0,3 percent of total turnover at 2.100 billion DKr.

The firms marked as small or inactive have not been covered by the industrial accounts statistics since 1999. To take into account the turnover in active, but small and insignificant firms that can be estimated to around 0,1 percent of GDP a grossing up procedure has been established. Because this small amount of turnover is related to a huge number of firms it was decided to carry out the grossing-up at a more aggregated level instead of making detailed estimations of each firm. All variables in the Intermediate system has been grossed-up using turnover-based grossing-up factors. Based on the general enterprise statistics that contains turnover figures for all enterprises and includes information on whether each enterprise is covered by the industrial accounts statistic a grossing-up factor is calculated for each combination of DK-NACE-industry/ESA95-institutional-sector.

⁵ In the Danish national accounts some industries are defined to include all production of products characteristic for the industry and to exclude the production of other products. Wholesale and retail trade are defined in this way.

National accounts processing, recoding to the intermediate system format

The intermediate system contains some information which refers to firm branches (institutional units grouped by industry on the basis of main activity), whilst the rest refers to kind-of-activity unit industries⁶. Each individual intermediate system [MLS] code refers to either firm branch or kind-of-activity industry information. Until now the files have contained records for each individual unit. With the conversion into files in the format used by the intermediate system, codes for individual units are removed, and the figures are aggregated to DK-NACE industries/ESA 95 sectors. The sector codes are based on the ownership code, VIRKFORM, with the following translation:

Table 3.10 Connection between ownership codes and ESA 95 institutional sectors

Virkform	Sektor	
010	S14	Sole proprietorship
020	S14	Estate of a deceased person
030	S11	Ordinary partnership
040	S11	Limited partnerships
050	S11	Jointly owned shipping firms
060	S11	Limited company
070	S11	Limited partnerships
080	S11	APS
090	S11	Foundation or "self-owning" institution (also S.15)
100	S11	Commercial foundation or "self-owning" institution
110	S11	Association (may also be S.15)
130	S11	Cooperative society (may also be S.12)
140	S11	Limited cooperative society (may also be S.12)
150	S11	Limited association or company (may also be S.15)
160	S11	European Economic Unit
170	S11	Branch of foreign limited company or units with similar legal ownership
180	S11	Branch of foreign APS or unit with similar legal ownership
190	S11	Branch of foreign limited enterprise
200	S11	Branch of foreign enterprise n.e.s.
210	S11	Other foreign enterprise
220	S11	Fixed business address of European Economic Unit
230	S13	Central government
240	S13	Counties [Amtskommuner]
250	S13	Municipalities [Primærkommuner]
260	S13	National Church parish councils
270	S99	Enterprise being set up
280	S13	Other owner n.e.s.
990	S99	Legal ownership not known

Those items that in the intermediate system will refer to the firm level are extracted from the accounts statistics firm file. The accounts statistics codes are transferred to the intermediate system, using the key shown here, and a file is printed out with firm data in the intermediate system format.

⁶ For use in the compilation of institutional sector accounts, an alternative file is compiled with the accounts statistics' contribution to the intermediate system. Here, some extra MLS codes are added for property income transactions and items relating to kind-of-activity units appear with both firm and kind-of-activity branch.

Table 3.11 Transfer of items to the intermediate system [MLS] at firm level

Label	Variable	%	MLS-code	MLS-text
Writing off and writing down of tangible and intangible assets	ANMI	100.00	5100	Writing off and writing down of non-financial fixed assets
Writing down of current assets	NOAK	100.00	5200	Writing down of non-financial current assets
Secondary expenditure	SEUD	100.00	7060	Other operating expenditure
Income from lasting interests	INKI	100.00	4030	Income from lasting interests
Other return on financial fixed assets	UDFA	100.00	4032	Other interest and dividend income
Interest etc. received from fin. fixed assets	RIFA	100.00	4032	Other interest and dividend income
Interest etc. received from current assets	RIOM	100.00	4031	Interest etc. received from current assets
Writing down of financial fixed and current assets	NFAO	100.00	5300	Writing down of financial assets
Interest paid etc.	RUDG	100.00	4040	Interest paid
Extraordinary income	EOI	100.00	1060	Extraordinary income
Extraordinary expenditure	EOU	100.00	7061	Extraordinary expenditure
Corporation tax on profit/loss for the year	SSAR	100.00	4041	Corporation tax
Profit/loss for the year	AARE	100.00	4043	Profit/loss for tax purposes
Dividends	UDBY	100.00	4044	Distributed income
Intangible fixed assets, total	IAAT	100.00	8110	Intangible fixed assets
Land and buildings	GRBY	100.00	8120	Land and buildings
Technical plant and machinery	ATAM	100.00	8121	Technical plant and machinery
Other plant, machinery and equipment	AADI	100.00	8122	Other plant, machinery and equipment
Advance payments and tangible fixed assets etc.	FMAA	100.00	8129	Other tangible fixed assets
Amounts outstanding	TILG	100.00	8130	Financial fixed assets
Holdings of shares and equity	ABAE	100.00	8130	Financial fixed assets
Holdings of bonds and other securities	ABOA	100.00	8130	Financial fixed assets
Total financial fixed assets	FAAT	100.00	8130	Financial fixed assets
Amounts outstanding from sales of goods and services	TSVT	100.00	8149	Other current assets
Work in progress on account of others	UIAF	100.00	8149	Other current assets
Other claims	ANTI	100.00	8149	Other current assets
Total claims	TGT	100.00	8149	Other current assets
Holdings of shares and equity	OBAE	100.00	8149	Other current assets
Holdings of bonds and other securities	OBAV	100.00	8149	Other current assets
Liquidity holdings	LIBE	100.00	8149	Other current assets
Securities and participatory interests, total	VKT	100.00	8149	Other current assets
Current assets, total	OMAT	100.00	8149	Other current assets
Equity, closing stocks	EGUL	100.00	8210	Equity
Provisions	HENS	100.00	8220	Provisions
Long-term debts to suppliers	LGL	100.00	8230	Long-term debts
Other long-term debts	ALG	100.00	8230	Long-term debts
Short-term liabilities to suppliers	KGL	100.00	8240	Short-term liabilities
Other short-term liabilities	AKG	100.00	8240	Short-term liabilities

Similarly, those items which are to be input at kind-of-activity industry level are transferred from the accounts statistics workplace section. Most of the intermediate system items can be worked out simply on the basis of the accounts statistics codes in accordance with the following key:

Table 3.12 Transfer of items to the intermediate system [MLS] at workplace level

Label	Variable	%	MLS-code	MLS-text
Sales of own products	EOMS	100.00	1018	Other and unspecified net sales
Own-account work	AUER	100.00	1012	Manu. of operating equipment for own use
Other operating income	ADR	100.00	1019	Other, secondary operating income
Purchases of raw materials, ancillary materials and packaging	RKOB	100.00	2015	Other and unspecified purchases (consumption) of raw materials
Purchases of energy (excl. running of vehicles)	KENE	100.00	2013	Purchases (consumption) of fuel and power
Purchases of processing to order	KLOE	100.00	2014	Purchases of processing to order and subcontracting
Rent expenditure	UDHL	100.00	7020	Expenditure on rent, excl. heating
Exp. on the acquisition of consumables etc.	UASI	100.00	7025	Exp. on consumables
Temporary employment agencies	UDVB	100.00	7042	Temporary employment agencies
Operational leasing	ULOL	100.00	7024	Operational leasing
Ordinary bad debts	OTDE	100.00	7026	Ordinary bad debts
Other external expenditure (incl. the running of vehicles)	EKUD			Distrib. as in costs survey etc.
Wages and salaries	LGAG	100.00	4015	Wages/salaries and employer contributions
Expenditure on pensions	PUDG	100.00	4016	Expenditure on pensions
Other expenditure on social security	AUDG	100.00	4017	Other staffing expenditure
(1)Raw materials, ancillaries, fuel and packaging (opening stocks)	PRHB	100.00	5060	Raw materials, opening stocks
(2)Raw materials, ancillaries, fuel and packaging (opening stocks)	PRHB	100.00	2015	Other and unspecified purchases (consumption) of raw materials
(1)Raw materials, ancillaries, fuel and packaging (closing stocks)	URHB	100.00	6060	Raw materials, closing stocks
(2)Raw materials, ancillaries, fuel and packaging (closing stocks)	URHB	-100.00	2015	Other and unspecified purchases (consumption) of raw materials
Work-in-progress (opening stocks)	PVUF	100.00	5065	Finished goods, opening stocks
Work-in-progress (closing stocks)	UVUF	100.00	6065	Finished goods, closing stocks
Manufacture of finished goods (opening stocks)	ELPR	100.00	5065	Finished goods, opening stocks
Manufacture of finished goods (closing stocks)	ELUL	100.00	6065	Finished goods, closing stocks
(1) Opening stocks (goods for resale)	HLPR	100.00	5061/ 5062	Opening stocks of work-in-progress for resale
(2) Opening stocks (goods for resale)	HLPR	100.00	7019	Goods for resale, purchases
(1) Closing stocks (goods for resale)	HLUL	100.00	6060/ 6061	Closing stocks of work-in-progress for resale
(2) Closing stocks (goods for resale)	HLUL	-100.00	7019	Goods for resale, purchases
Advance payments, purchased goods (closing stocks)	UFKV	100.00	8149	Other current assets
Total inventories of goods (opening stocks)	PVBT	100.00	8141	Opening stocks
Total inventories of goods (closing stocks)	UVBT	100.00	8142	Closing stocks
Intangible fixed assets (additions)	TIAA	100.00	6110	Software bought in/purchases of intangible assets, other and unspecified
Purchases of existing buildings (inc. land value)	KEB	100.00	6121	Purchases of existing buildings (including land value)
Constr. expenditure, new building (excl. land)	OPNY	100.00	6123	Constr. of new buildings (excl. land value)
Purchases of unbuilt land	KUBG	100.00	6122	Purchases of unbuilt land
Rebuilding and improvements to buildings and installations	OFBB	100.00	6124	Rebuilding and improvements to buildings
Roads, ports, open spaces, etc.	VHPK	100.00	6125	New layout and rebuilding of roads, ports, etc.
Tech. plant and machin. (operating equipment)	DTAM	100.00	6134	Purch. of plant & machin., other & unspec.
Other plant, machinery and equipment (additions)	TAAD	100.00	6134	Purch. of plant & machin., other & unspec.
Intangible fixed assets (disposals)	AIAA	100.00	6210	Disposal of software/ intangible assets, other and unspecified
Sales of buildings (incl. land value)	SABY	100.00	6221	Sales of existing buildings (incl. land value)
Sales of unbuilt land	SUBG	100.00	6222	Sales of unbuilt land

Sales of roads, ports, open spaces, etc.	SVHP	100.00	6223	Sales of roads, ports, open spaces, etc. (including land value)
Sales of technical plant and machinery	STAM	100.00	6234	Sales of plant and machin., other and unspecified.
Sales of other plant, machinery and equipment	SADI	100.00	6234	Sales of plant and mach., other & unspec.
Sales of own products	EOMS	100.00	1018	Other and unspecified net sales
Sales (goods for resale)	HOMS	100.00	1016	Sales of goods for resale
Purchases of raw materials, ancillaries and packaging	RKOB	100.00	2015	Other and unspecified purchases (consumption) of raw materials
Purchases (goods for resale)	HKOB	100.00	7019	Goods for resale, purchases

In the early nineties financial leasing was often treated as current expenditure in Danish business accounts. In the national accounts, it was decided to assume that that the reported accounting figures to a large extent reflected the treatment in the enterprises' own accounts, but that accounting practice moved closer to the national accounts treatment over time. For this reason, the 1995 leasing correction (for services relating to financial leasing counted by the users as purchases of services) was scaled down. According to new legislation that came into force January 1st 2002 financial leasing contracts must now be shown as capital formation in business accounts. In 2002 annual accounts that covered a period starting in the previous year were not necessarily affected by the new law, but from 2003 it can be assumed that business accounts follow principles in accordance with the national accounts practice and that a correction for different treatment is no longer justified.

The accounts statistics item for "other external expenditure", EKUD, is split into a number of MLS codes. Within most manufacturing industries, the division can, as hitherto, be based on distributions compiled from surveys of the use of services. Some of these distributions dates back to a survey form 1992, but adjustments have been introduced over the years. Since the industrial accounts statistics have split expenditure on rent, acquisition of equipment treated as current expenditure in the accounts, expenditure on temporary employment agencies, operational leasing and ordinary bad debts, into independent items, which they were not previously, the distribution keys from the services enquiry have been revised so that the shares for these items are no longer included. At the same time, account has been taken of the fact that a share of the EKUD item is motor vehicle fuel. The revised distribution keys are compiled only for national accounts industries, and so for each DK-NACE industry the key for the national accounts industry in which it is included is used.

Table 3.13 Percentage shares of the EKUD item. Examples from manufacturing industries

National accounts industry:		140009	1510000	152000	153000	154000	155000
MLS-code							
4046	Exp. on insurance	2,75	3,45	3,74	2,38	3,33	2,29
6102	Software bought in	0,39	2,91	0,53	2,96	0,30	1,34
6121	Purchases of existing buildings	0,46	0,55	0,17	0,24	0,18	0,05
7026	Renting and operational leasing	0,00	0,23	1,44	1,65	0,13	0,30
7027	Repair and maintenance of buildings	2,47	3,32	3,21	2,58	1,22	2,83
7028	Repair and maintenance of structures	1,08	0,53	0,65	0,55	0,49	0,68
7029	Repair and maintenance of transport equipment	3,38	1,40	1,41	0,96	0,45	5,57
7030	Repair and maintenance of machinery and equipment	25,16	12,30	15,18	12,91	11,39	15,93
7040	Contributions to trade organisations, input	1,30	2,94	1,67	1,00	0,40	1,94
7041	Expenditure on licences and royalties	0,13	0,06	0,11	0,18	0,19	0,00
7042	Other external expenditure which is input	61,25	70,86	70,62	73,76	80,30	68,73
7043	External expenditure n.e.c.	1,63	1,49	1,27	0,82	1,61	0,34
Total		100.00	100.00	100.00	100.00	100.00	100.00

The industrial accounts statistics now cover a much wider range of industries than the manufacturing industries that have been covered by surveys of the use of services. For industries not included in the services surveys, distribution keys for the EKUD item have had to be based on the SLS-E system's basic register. These distribution-keys are available with a breakdown into both DK-NACE and national accounts industries⁷.

Table 3.14 Percentages of the EKUD ["other external expenditure"] item. Examples from industries not included in the services enquiry:

DK-NACE industry:		524410	524430	524440	524450	524510	524520
MLS-code							
4046	Expenditure on insurance	4,31	5,87	5,37	5,58	5,84	7,46
7024	Renting and leasing, n.e.c. and unspecified	2,92	2,00	2,71	3,46	3,33	3,01
7027	Repair and maintenance of buildings	2,88	0,47	1,18	0,85	0,95	0,88
7035	Repair and maintenance, n.e.c. and unspecified	1,75	1,12	1,87	2,07	1,63	1,67
7042	Other external expenditure which is input	88,16	90,53	88,87	88,05	88,25	86,98
		100.00	100.00	100.00	100.00	100.00	100.00

⁷ It is evident that for many industries better and more up to data information on the use of services are needed. During 2006 Statistics Denmark has started a series of surveys that will improve our knowledge in this area.

National accounts processing, comparison of industrial accounts statistics and industrial commodity statistics

"Commodity statistics", i.e. product statistics for the extraction of raw materials (except crude oil and natural gas) and manufacturing, are not used directly to determine the enterprises' main economic magnitudes in the national accounts, but are used primarily for the breakdown of sales by product. For this use, too, the commodity statistics' information on the enterprises' output has to be assigned to the same industries as in the accounts statistics. It is usually assumed that the industry allocation in the accounts statistics is most likely to be correct, since it is decided at a later stage on the basis of knowledge of the composition of output in the accounting year in question, whereas the industry allocation in the commodity statistics shows the composition of output for a previous accounting year.

When the industrial accounts statistics was introduced in 1995 the firm accounts statistics were industry-allocated on the basis of an examination of the commodity statistics for that year. It is assumed that the accounts statistics still is the best source for industry allocation of firms. Since the workplace statistics is corrected to be consistent with the firm statistics, it must be assumed that it is still most logical, failing better information, to go by the accounts statistics if these conflict with commodity statistics.

The accounts statistics data on workplace sales of own products are first aggregated into kind-of-activity units. Since the kind-of-activity unit is not identified in the accounts statistics, a unit can be identified only as the sum of the firm's workplaces within a given DK-NACE industry. Thus the delimitation of workplaces can be effected for example by which version of the business register is used, and this can lead to difficulties for the comparison if the two statistics are not based on exactly the same register versions.

Attempts are made to combine the information in commodity statistics into kind-of-activity units which can be matched with those units which are compiled from accounts statistics. In this way most of the units can be compared with the corresponding units in the accounts statistics. There are obviously normally few and small problems in firms with only one kind-of-activity unit. In general, the majority of the matching problems seem to affect large units. In cases where the commodity statistics' kind-of-activity units appear to cover the same enterprise as in the accounts statistics to a reasonable extent, the accounts statistics' kind-of-activity industry is transferred automatically to the commodity statistics unit. Doubtful cases are examined more closely and in some cases the industry allocation in the accounts statistics may be corrected in the input data used for the final run⁸.

An incomplete match can mean that a number of estimated corrections will have to be made to the breakdown of the industries' sales by product, which is otherwise based on the commodity statistics. When corrections are made it is usually seen too, that total sales in each of the national accounts' product balances should not be smaller than the sales which appear in the commodity statistics.

⁸ It has also happened that the industry allocation was corrected in both accounting and commodity statistics, if information on the character of the enterprise's output was obtained from other sources.

3.1.4.3 Division between the industrial accounts statistics, the SLS-E statistics and other calculation systems

Ideally, the different accounting systems, i.e. the accounts statistics system, the SLS-E system, the systems for calculating on the basis of industry-specific accounts statistics and the calculation system for government non-market activity (OIMA) in S.13 should have clear dividing lines at firm level. Within each system, it should be possible to divide up the relevant firms into workplaces/kind-of-activity units which can be allocated to functional industries. In particularly simple cases, the firm branch and the kind-of-activity industry may be assumed to match so well that kind-of-activity units from one system do not have to be placed in industries belonging to another system. However, the situation may sometimes be more complicated, and there is a risk of double-counting or omitting units. When the final national accounts are compiled, therefore, a great effort is made to ensure that the allocation of firms and producer units (workplaces) by industry remains consistent.

I. FBRUDE

Until 1999 data for most service industries had to be based on the SLS-E statistics and workplaces covered by the industrial accounting statistics would often belong to firms within the scope of the SLS-E statistics. In general, the industrial accounts statistics must be assumed to be the more robust source. Their accounting plan is more specific and grossed up to the total population at a more detailed level. Therefore figures based on the industrial accounts statistics is usually preferred to figures based on other sources. However, the way in which firms are divided into kind-of-activity units must conform to the principle that the accounting items for a given firm's workplaces sum to the firm's accounting items (when these are estimated correctly in line with the chosen breakdown of the firm into kind-of-activity units).

After the industrial accounts statistics in 1999 was extended to cover most of the market producing service industries the borderline between industries based on this source and industries based on the SLS-E-statistics has become much clearer. Most of the complicated cases had been caused by firms with workplaces in manufacturing, wholesale trade or various business services that are now all within the scope of the industrial accounts statistics.

The FBRUDE workplaces are transferred to the intermediate system together with the other workplace information in the industrial accounts statistics. The firms in the SLS-E statistics should be divided up in a way which respects the accounting figures for these workplaces that have already been calculated. This happens by deducting the FBRUDE figures from the firm totals before the firm remainder is distributed over the other kind-of-activity units.

In practice an FBRUDE data set is worked out in the intermediate system format. This is the contribution of the same workplaces to the intermediate system, but it differs in being divided up into (the corrected) firm branches instead of kind-of-activity branches.

When the FBRUDE units are then separated out from the SLS-E statistics "firms", the items are recoded to the (reduced) accounting plan used here. The FBRUDE figures are compared with the corresponding accounting figures in the SLS-E statistics firms. If the separating out leaves the remainder with an invalid negative sign, the remainder is printed out in a warning list and the remainder item is entered as nil in the file which is then used for the breakdown into kind-of-activity units in the SLS-E system. No further action is taken with insignificant and probably

random differences of this kind. With larger differences there an explanation is looked for and in some cases, this may lead to corrections to the data input into the calculation systems.

II. The General enterprise statistics. Removal of dual coverage.

The General enterprise statistics which is the starting point for the SLS-E Statistics includes firms liable for VAT which at the same time may occur in public enterprises, government non-market activities or the industrial accounts statistics. For the national accounts estimate, it is vital that firm units be included once and once only, since otherwise there may be incomplete coverage or double counting. Therefore a system has been built into the national accounts calculation systems to separate out that part of the firms which would appear to belong to the calculations based on industry-specific accounts statistics, government non-market output (OIMA) in S.13 or the industrial accounts statistics, before the remainder is divided up in the SLS-E statistics.

Since the General enterprise statistics includes information on whether the source of information for each enterprise is the industrial accounts statistic or the accounts statistics for industries where public corporations predominate, these removals are straight-forward.

When it comes to public units these also has to be “cleaned out” from the General enterprise statistics. Those which are liable for VAT are picked out and divided up according to whether they have market or purely non-market activity, the basis for the split being a list of central and local government VAT units compiled by the Public Finances and Prices Division. Enterprises with no market activity are taken out. Checklists are printed out with the VAT sales and purchases of those units which have been removed/retained, as the case may be. Finally, a check is made on which large units with ownership codes 230: central government, 240: counties and 250: municipalities were still occurring in the file. The majority proved to be units we treat as being covered by non-market activity, and which were therefore also removed from the data.

Transition from firm branches to national accounts industries in the SLS-E statistics

A "control key" controls the choice of “system” used for compilation of each individual industries. This key maintains the borderline between the industrial accounts statistics and the SLS-E statistics. It has been adjusted every time industrial accounts statistics has been extended to cover service industries that previously were based on SLS-E statistics.

To avoid delimitation problems, as described in the previous section, units which are calculated in full in the industrial accounts statistics and, wherever possible, units included in OIMA or calculated on the basis of industry-specific accounts statistics or accounts statistics for industries where public corporations predominate are removed from the General enterprise statistics before it is used as the basis for grossing up in SLS-E statistics.

The FBRUDE data are separated out, as previously described, in such a way that the accounting figures which come from them are removed from the firm branch figures before the remainder is divided into kind-of-activity industries outside the scope of the industrial accounts statistics. This also means that total wages and salaries and employment relating to producer units within the scope of the questionnaire-based statistics are subtracted from the firm branch figures for distribution by kind-of-activity industry outside the scope of these statistics. As already mentioned, FBRUDE data are not allowed to remove more than the item's original value from any accounting item which should be positive. Otherwise, a good many cases of invalid negative items would occur.

The remaining part of firm branches are broken down into other kind-of-activity industries - for example, a wholesaling firm with combined wholesaling activity and engineering consultancy activity is divided up - in two stages. First of all, initial values are calculated for what has to be transferred to each kind-of-activity industry which receives something from the firm branch, on the basis of the breakdowns of the corresponding firm branches into accounting items. For example, the accounting items in a producer unit classified as engineering consultancy activity and which is to be transferred from the wholesale trade *firm* branch to the engineering consultancy kind-of-activity industry is initially estimated on the basis of the accounts observed in the engineering consultancy *firm* branch. The norms for these breakdowns of firms on the basis of the producer units which make up the firms are normally, and as the default, defined as the accounting item per krone (DKK) of wages/salaries. Information on total wages and salaries is available with a cross-distribution by firm branches and kind-of-activity industries and is therefore a generally useable and economically extremely meaningful basis for the split. These initial distributions are summed, and for each item the distribution is adjusted so that the contributions to the different kind-of-activity branches total the amount which is to be distributed. Account is thus taken of the ratios in both the industries which have values added to them and the firm branch which relinquishes value.

3.1.4.4 Sector-industry tables

Since the national accounts processing of accounts statistics includes a systematic double coding of both the accounts actually observed and the grossed up share by industry for the individual producer unit and institutional sector for the firm to which the producer unit belongs, sector-industry tables appear directly in the accounting system, including for those sectors where the accounting figures collected are grossed up.

3.1.5 Industries where output is calculated using price times volume

3.1.5.1 Agriculture, horticulture and the raising of fur animals

Delimitation and consistency vis-à-vis other industries

Agriculture, horticulture and the raising of fur animals covers national accounts industries 011009 agriculture and 011209 horticulture, orchards, etc. In agriculture, to which the raising of fur animals belongs, there is only market activity. Horticulture consists of both market and non-market activity, the non-market being landscape gardeners in the general government sector. For this share of output and value added, reference should be made to Section 3.1.2.2.1, general government. A certain percentage of government non-market activity in the DK-NACE classification comes under horticulture.

The following description refers to market activity. In the national accounts, this is defined by activity, i.e. "agriculture", for example, is the single activity of producing agricultural products. All productive activity on agricultural holdings which does not involve the production of agricultural products is transferred to the relevant industries. In practice, secondary activity on agricultural holdings is predominantly the letting of dwellings (including holiday homes) and non-residential premises. This secondary activity is transferred to the relevant industries (702009 the letting of dwellings or 702040 the letting of non-residential buildings etc.). The statistical producer units for agriculture, horticulture and the raising of fur animals are thus units of homogeneous production as

defined in the ESA 95, paragraph 2.112. If a given agricultural holding produces both agricultural and horticultural products, the holding is divided into an agricultural share and a horticulture share and output and value added are calculated separately for these two shares. The two shares are each units of homogeneous production whose output value is calculated as the sum of the value of the products in question.

Statistical sources

The statistical source for agriculture, horticulture and the raising of fur animals is Danmarks Statistik's agricultural statistics which, as already stated, are a national accounts estimate. The statistics comply with the guidelines in Eurostat's agricultural statistics manual. The calculations of intermediate consumption are based on 1) quantities of products used multiplied by the average selling price, 2) accounting information collected by the economic advisers for agriculture and 3) annual accounting statistics for agriculture and horticulture compiled by *Statens Jordbrugs- og Fiskeriøkonomiske Institut*.

Agricultural statistics are the statistical source in the national accounts for the estimate of national accounts industries 011009 agriculture and 011209 horticulture and orchards, etc.

However, the agricultural statistics estimates include machine pools, which in the national accounts come under 014000, agricultural services*. Since all the output of agricultural services is inputs for agriculture, this does not affect the estimate of value added. In the national accounts, agricultural services [machine pools] are calculated separately from tax-based accounting statistics and the activity is transferred to industry 014000, agricultural services.

For reference year 2003, the Danish agricultural statistics were compiled in line with EAA – Economic Accounts for Agriculture, the EU agricultural statistics manual. This is in line with the ESA 95, which requires internal deliveries within agriculture to be included in the estimate of gross output and intermediate consumption. According to the ESA 95, the statistical unit for the production account is the local kind-of-activity unit (producer unit) in agriculture as in all other industries. In the national accounts however, we have traditionally used a “national farm” principle and consolidated direct sales between agricultural holdings. Since introducing deconsolidation does have a considerable effect on production and intermediate production, but not the GNI, it has been decided to keep the consolidation in practice. In the next major revision of the national accounts, there will be opportunity to address this point and comply in full with the ESA 95 principles.

Method of calculation

The usual method of calculating output is to use prices multiplied by quantities (volumes). For the largest crop product, cereals, the yield of the individual kinds of cereal harvested is calculated first of all. These figures are then multiplied by the average selling prices for cereals collected from all the larger cereal merchants. For the largest animal product, i.e. pigs for slaughter, the sales value is calculated in a similar way on the basis of the total number of slaughterings at abattoirs and slaughterhouses as reported to *Fødevaredirektoratet* [the Danish Veterinary and Food Administration]. This quantity divided by the number of types of animals slaughtered is multiplied by the average settlement weights reported to the *Danske Slagterier* organisation. Thus a figure is arrived at for the number of kilograms of slaughter meat divided by category of pig. The price variable is calculated monthly on the basis of the official *Danske Slagterier* prices.

* The Danish translates literally as "machine pools, landscape gardeners, etc." .

Estimate of intermediate consumption

On the basis of the sources referred to in 3.1.2.4.1.2, total intermediate consumption is calculated by grossing up to the total population of agricultural holdings. The figures are grossed up separately for the very small holdings not covered by the annual agricultural censuses. A large share of intermediate consumption can be calculated extremely reliably on the basis of domestic supplies, either as physical quantities multiplied by an average price or as an estimate of total sales to agriculture. The source for that share of inputs to which the above does not apply is accounting information available either from accounts collected by economic advisers to agriculture or the annual sample-based accounting statistics for agriculture and horticulture which come from *Statens Jordbrugs- og Fiskeriøkonomiske Institut*.

Breakdown of output by product

Since agriculture, horticulture and the raising of fur animals are activity-defined on the basis of the products produced and the estimate of value added using a price times volume method, the product breakdown is self-evident.

Breakdown of intermediate consumption by product

In the agricultural statistics, the majority of intermediate consumption is broken down by product directly, usually on the basis of information on quantities of the products in question used (e.g. cereals for fodder) multiplied by average prices or from information on sales to agricultural holdings (feedingstuffs, fertilisers, pesticides). The remaining share of intermediate consumption - energy and services, for example - which is typically calculated from accounting statistics, is available in agricultural statistics in a breakdown by main type of product. For the compilation and balancing of the national accounts supply and use tables, national accounts statisticians divide these main types into individual products, generally using the most detailed accounting plan in the accounting statistics.

3.1.5.2 Dwellings

Delimitation and consistency vis-à-vis other industries

Industry 702009, dwellings, is activity-defined. The statistical units are units of homogeneous production which have no activity other than the letting of dwellings/own-account production of dwelling services. The industry covers both the production of dwelling services in the form of letting dwellings (actual rentals) and imputed rentals in owner-occupied dwellings.

The letting of dwellings is an important secondary activity for institutional units whose main activity is in other industries, especially banks, insurance corporations and pension funds. In the national accounts, this activity is in every case separated out into quasi-corporations in the non-financial corporations sector. In the calculations for the financial corporations, the return on their housing investments is recorded as property income (dividends).

Conversely, the letting of non-residential premises is an important secondary activity for many producer units which are primarily concerned with the letting of dwellings. A considerable proportion of housing in towns includes retail premises, and similarly there may be offices, workshops etc. in property which is primarily residential. The activity of letting non-residential

premises is separated out from the output of dwelling services and transferred to industry 702040 the letting of non-residential buildings etc.

In practice, the output value in the "dwellings" industry is estimated from a price times volume calculation where the stratified stock of dwellings is multiplied by appropriate average rentals, whilst the output value of industry 702040, the letting of non-residential buildings etc., is estimated from the expenditure side.

Statistical sources

The output value of dwellings is estimated every fourth year as a benchmark calculation of the price times volume type, based on the total stratified housing stock and comprehensive rental figures covering almost two-thirds of all dwellings in Denmark which are let. A description of the annual estimates of the housing stock and of the major four-yearly rental surveys can be found in Section 11.3. Both sources must be considered to be of high quality.

In years between the benchmark calculations, the latest benchmark is projected using price and volume indicators. The price indicator is rental information from the sample survey of rentals which is carried out every six months to provide information on changes in rentals in the consumer price index. Section 11.3 describes this source. The volume indicator is information from building statistics based on *Bygnings- og Boligregistret (BBR)* [the Register of buildings and dwellings] which gives the number of square metres constructed combined with an estimate of the number of dwellings demolished.

Method of calculating output

The benchmark calculation is particularly detailed and uses the stratification method which the GNP Committee approved as the preferred method. The stratification of the housing stock is much more detailed than the minimum requirements set out in the Commission Decision (95/309/EC, Euratom). Whilst this Decision requires a minimum of 30 strata, the Danish calculation of levels for 1999 uses roughly a thousand strata. A detailed account of the method of calculation can be found in Section 3.17.

Estimate of intermediate consumption

This is calculated separately for dwellings which are let and owner-occupied dwellings, using an input percentage (intermediate consumption/output) derived from accounting material for landlords/owners. The source for dwellings which are let is the accounts for all social housing corporations. These are market non-profit institutions which come in the non-financial corporations sector. They let housing which more often than not has been built with the help of public funds in the form of direct or indirect rent subsidies. This social housing makes up around 43% of all dwellings which are let, and there is no reason to assume that their costs structure (operating expenditure excluding interest expenditure) is not representative of the letting market as a whole. For owner-occupied housing, the accounting figures come from the FU [Survey on income and expenditure = household budget survey]. The respondents who are owner-occupiers are extracted. Stamp taxes on housing loans and financial intermediation services which are paid for directly* and which are inputs for the dwellings industry are calculated not from the above-mentioned accounting figures but from separate information from tax statistics and statistics on financial institutions.

* Please see note on the use of "paid for" in Chapter One.

Breakdown of input by product

The most important intermediate consumption item is ordinary repairs and maintenance. Information on these items can be found separately in the accounts for the social housing corporations and in the FU. The whole of expenditure on ordinary repairs and maintenance in corporations which let dwellings must by definition be considered as intermediate consumption. As regards expenditure on owner-occupied housing, that share of ordinary repairs and maintenance which would normally be paid for by the tenant if the dwelling were let, i.e. minor routine repair and maintenance work, is treated not as intermediate consumption but as private final consumption expenditure. Typically, this is internal maintenance in the form of painting, wallpapering and flooring maintenance. Such items are calculated from the detailed FU estimate of expenditure on craftsmen and materials.

The other intermediate consumption expenditure items, apart from stamp taxes on housing loans and fees to financial institutions, are generally divided by product on the basis of the summary breakdown of operating expenditure other than on repairs and maintenance by major type in the social housing corporation accounts.

3.1.5.3 Non-profit institutions serving households

Delimitation and consistency vis-à-vis other industries

In exactly the same way as Sector S.13, General government, by definition covers only government non-market producer units in the Danish national accounts, Sector S.15, Non-profit institutions serving households, by definition covers only private non-market producer units. All market producer units which belong to private non-profit institutions are treated as quasi-corporations and transferred to the non-financial corporations Sector S.11 or the financial corporations Sector S.12.

The only real delimitation and consistency problem which occurs with private non-market producers is the link between unemployment funds and trade unions. Unemployment funds are part of S.13 whereas trade unions come under S.15. In practice, many unemployment funds are administered by the trade unions to which they are linked, and the funds reimburse the trade unions for the relevant administration costs. This activity overlap is calculated on the basis of the accounts for the country's largest trade union HK [the Union of Commercial and Clerical Employees in Denmark], which is considered to be representative of this field. That share of trade union activity which is for the account of the unemployment funds is already included in the public accounts which are the basic data for the calculation of S.13, and therefore have to be stripped out from the calculation of activity in trade unions.

Statistical sources

By far the largest expenditure component in the case of private non-market output is the wage or salary bill. If, in this area where statistical coverage in the accounts is weak in virtually all countries, one can at least be certain that the total wage or salary bill is included, then one has gone a long way towards reliable and exhaustive estimates. This is the case in Denmark, where the ERE* statistics calculate the total wage or salary bill in all producer units in the economy, including in private non-profit institutions serving households. This is the main source for the calculation.

* *Erhvervsbeskæftigelsesstatistik*, translated into English in Danmarks Statistik publications as "Establishment-related employment statistics" (ERE). Please see Chapter 4.

For want of accounting statistics in this field, the other components in the estimate of output from the costs side, i.e. intermediate consumption, consumption of fixed capital and other taxes and subsidies on production, are calculated on the basis of the accounts for the largest trade union (HK). The ratio of, for example, intermediate consumption and total wages and salaries in this trade union is thus assumed to be representative of all private non-market producers. The validity of this assumption should be judged in the light of the fact that trade unions in Denmark make up by far the largest share of private non-market producers and that it is reasonable to take the HK costs structure to be representative of trade unions in general.

Method of calculation

The starting point is, as already mentioned, direct and complete coverage of the total wage bill. Since all employees are covered by the ERE statistics, there is no need for any grossing up on the basis of employment data etc, with the uncertainty that this would imply. The total wage bill in the ERE statistics is raised by 15% to cover the employer contributions to pension schemes etc, which are to be included in the national accounts compensation of employees. Intermediate consumption excluding repairs and maintenance are estimated, on the basis of HK's accounts, at 55% of total wages and salaries (excluding employer contributions). The repair and maintenance of buildings and machinery is put at 5%/1% respectively of total wages and salaries. On the basis of the national accounts capital stock estimates, the consumption of fixed capital is put at 49.4% of the wage bill. Finally, other taxes and other subsidies on production are calculated in the national accounts' special calculation system for taxes and subsidies.

Production in private, non-market producer units

Output value is estimated as the sum of the cost components intermediate consumption, compensation of employees, other taxes on production less other subsidies on production and the consumption of fixed capital.

Breakdown of output by industry and product

Private (other) non-market output occurred in the following national accounts industries in 1995:

853209	Social institutions etc. for adults
910000	Activities of membership organisations.

In addition to the private non-market output of NPISHs, these two national accounts industries include output in government non-market producer units. There are no market producer units in these two industries.

The total output value of NPISHs was DKK 10 596 million in 2003, divided into the following products which each correspond to an industry code at the most detailed industry grouping (DK-NACE):

Table 3.15: Output of NPISHs divided by product, 2003

Product number	Text	Output (DKK 1000)
	Associations combating diseases and performing activities aimed at social work, etc.	1.736.220
853260	Charitable trusts and foundations	364.961
911200	Activities of professional organisations	950.175
912000	Activities of trade unions	5.250.994
913120	Activities of religious institutions and organisations	643.343
913200	Political parties	258.095
913310	Tenants' associations	88.378
913320	Outdoor organisations	130.122
913330	Other political and ideological organisations	482.981
913340	Other professional and cultural organisations and institutions	425.645
913390	Social associations, lodges, etc.	264.937
Total		10.595.851

Breakdown of intermediate consumption by product

The items "rentals" and "repair and maintenance" are estimated directly in HK accounts and these percentages are used for all NPISHs combined. For the other intermediate consumption, there is no accounts-based costs structure. The breakdown is based on the costs structure in similar activities within business services and on common sense considerations, such as the fact that a certain number of office staff equals a certain supply of window polish for the windows in the offices occupied.

3.1.5.4 Private households with employed persons**Delimitation**

National accounts industry 950000, private households with employed persons, comprises private home help supplied by persons who do not invoice their customers for the work they do. The majority of the activity consists of some kind of hidden activity or work such as babysitting by children and young people who do not pay tax because their income is below the threshold. Regarding the regular "legitimate" activity, the majority of this consists of home help for disabled people employed by households, but treated as a social transfer in kind purchased by general government and made available to households. The remaining "legitimate" activity is small and of minor importance. This activity is included as market activity in national accounts industry 747000, industrial cleaning.

Choice of sourcesConsumer surveys versus labour force surveys:

Apart from the activity of home help for disabled people where values are taken directly from government accounts, most of the activity is "concealed" and therefore tax information is obviously not useable here. *A priori*, it is likely that the FU [household budget survey] will be a suitable source, since it puts questions to the purchasers and not the vendors. Since it is only a minority of households which have help in the house to any noticeable extent, however, the sampling uncertainty in the FU is too high for it to be a realistic source. Instead, Statistics Denmark has now carried out two benchmark surveys linked to the labour force surveys for 1992 and 2004, in which the households were asked a series of questions on their untaxed activities. Interviewees were asked

about the number of hours worked and their income. On the basis of these figures, benchmark values were fixed for output by grossing up to the total population.

Benchmark years versus current years

From 1992 and onward values were projected in the current years using changes in the net price index (consumer price index excluding taxes on products and subsidies) for cleaning. And off course, the new benchmark value in 2004 gave an opportunity to make a minor revision of the figures in the years between the two benchmarks. From 2004 and onward values will again be projected in the current years using changes in the net price index (consumer price index excluding taxes on products and subsidies) for cleaning. This means assuming that hours of work remain constant. The price index reflects changes in cleaning rates charged by professional firms. A new benchmark will next be established when resources can be made available to extend the labour force surveys to include special questions on work in the black economy.

3.2 Valuation

According to ESA 95, output has to be valued at basic prices, and this concept is also used in the Danish national accounts.

Danish accounting and product statistics asks for turnover at basic prices, partly for national accounts purposes but also because Statistics Denmark has always considered that this was the price concept which firms could relate to best, since it corresponds to the income which goes into the firm's own till rather than to government coffers. The concept of "net sales" in the Danish legislation on the submission of annual accounts (the Annual Accounts Act) corresponds to the basic price concept, since it covers the sales value after deduction of discounts and VAT and other excise duties (and, conversely, additions for subsidies on products).

In Denmark's case, therefore, there is generally no need for any procedure to switch from observed prices such as producer prices to the ESA 95 concept of basic prices. The sales observed in the sources are sales at basic prices.

3.3 Transition from private accounting and administrative concepts to ESA95 concepts

Transition to common accounting plan

Intermediate system 1

After processing, all the accounting statistics underlying the national accounts calculations of value added are transferred to a common accounting plan, namely the plan used in the "intermediate system" shown in Table 3.16 The first version of the intermediate system is simply a file that contains the data from the four main systems after they are transformed to the common codes. In this file firms (institutional units) are broken down wherever necessary into producer units, so that the statistical unit for the calculation of value added, as required in the ESA 95, is the producer unit or a hypothetical unit of homogeneous production.

The industry classification used in the intermediate system follows the most detailed six-digit code in the Danish version of the NACE Rev. 1 classification of activities (DK-NACE) for market

production covered by the accounts statistics system and the tax-accounting system. A number of less detailed industries are used to include the results from other sources. The intermediate system contains the sector classification, thus a cross-classification by industry and sector is possible.

Table 3.16 Accounting plan in the intermediate system.

Text		Industrial accounts statistics
Resources :		
Output of originals	1003	----
Output of the hidden economy	1005	----
Fringe benefits, output	1007	----
0.1 FISIM, imputed financial services	1008	////
1.3 Manuf. of plant and machinery for own final use	1012	AUER
1.9 <i>Other net sales of own products</i>	1013	<i>OMS-HOMS (part of)</i>
2. Output for own final consumption	1014	----
Own-produced software	1015	----
3.1 Sales of goods for resale	1016	HOMS
3.2 Income from licences and royalties	1017	OMS-HOMS (part of)
3.9 <i>Other and unspecified net sales</i>	1018	----
4.1 Other, secondary operating income	1019	ADR
Other (services) sales (excl. 1017)	1059	OMS-HOMS (part of)
4.2 Extraordinary income	1060	EOI
4.3 Miscellaneous capital income	1061	----
Uses (inputs) :		
Intermediate consumption, government non-market activity	2010	----
5.1 Purchases (consumption) of fuel and power	2013	KENE
5.2 Purchases of processing-to-order work and subcontracts	2014	KLOE
5.9 <i>Other consumption (purchases) of raw materials</i>	2015	<i>KRH – (URHB – PRHB) –HKOB</i>
6. Consumption of goods for resale	7019	HKOB – (HLUL – HLPR)
7. Expenditure on rentals, excluding heating	7020	UDHL
8.1 Expenditure on the rental and leasing of machinery	7021	ULOL (part of)
8.2 Expenditure on the rental and leasing of motor vehicles	7022	ULOL (part of)
8.3 Expenditure on the rental and leasing of computer equipment	7023	ULOL (part of)
8.9 <i>Expenditure on other rental and leasing</i>	7024	<i>ULOL (part of)</i>
9. Acquisitions of equipment etc., expensed	7025	UASI
10. Ordinary losses, irrecoverable debts	7026	OTDE
11.1 Repair and maintenance of buildings	7027	EKUD (part of)
11.2 Repair and maintenance of structures	7028	EKUD (part of)
11.3 Repair and maintenance of transport equipment	7029	EKUD (part of)
11.4 Repair and maintenance of machinery	7030	EKUD (part of)
Repair and maintenance of buildings and structures	7031	EKUD (part of)
Repair and maintenance of machinery and transport equipment	7032	EKUD (part of)
11.9 <i>Repair and maintenance unspecified or n.e.c.</i>	7035	----
12.1 Contributions to professional organisations allocated to inputs	7040	EKUD (part of)
12.2 Expenditure on licences and royalties	7041	EKUD (part of)
12.3 Other external expenditure included in inputs	7042	EKUD (part of)
12.9 <i>Other external expenditure</i>	7043	---
Government fees as purchases of services	7044	EKUD (part of)
13 Financial intermediation services paid for directly	7050	RUDG (part of)
Insurance premiums (negative) correction	7055	----
Correction for gross taxes on leasing	7057	RSUF
Fringe benefits, IPC correction	7059	----
14.1 Other operating expenditure	7060	SEUD
14.2 Extraordinary expenditure	7061	EOU

14.2 Miscellaneous capital expenditure	7062	----
Indirect taxes:		
17.1 Property taxes	3112	EKUD (part of)
17.2. Motor vehicle taxes	3113	EKUD (part of)
17.3. Other taxes on production not linked to products	3114	EKUD (part of)
17.4 Subsidies not linked to products	3115	---
Inventories:		
20.1 Raw materials, opening stocks	5060	PRHB
20.2 Raw materials, closing stocks	6060	URHB
21.1 Goods for resale, wholesale, opening stocks	5061	////
21.2 Goods for resale, wholesale, closing stocks	6061	////
22.1 Goods for resale, retail, opening stocks	5062	HLPR
22.2 Goods for resale, retail, closing stocks	6062	HLUL
23.1 Other goods, opening stocks	5063	////
23.2 Other goods, closing stocks	6063	////
24.1 Finished goods, opening stocks	5065	PVUF + ELPR
24.2 Finished goods, closing stocks	6065	UVUF + ELUL
25.1 Goods for resale, opening stocks	5066	HLPR
25.2 Goods for resale, closing stocks	6066	HLUL
Changes in inventories (price-adjusted):		
20.3 Stocks of raw materials	2060	DEFL
21.3 Goods for resale, wholesale	2061	DEFL
22.3 Goods for resale, retail	2062	DEFL
23.3 Other goods	2063	DEFL
24.3 Stocks of finished goods	2065	DEFL
25.3 Goods for resale (manufacturing)	2066	DEFL
26.1 Total price adjustment, stocks of raw materials	2098	From MLS 1 to MLS 2
26.2 Total price adjustment, goods for resale	2099	From MLS 1 to MLS 2
Distributive transactions (and tax figures):		
Compensation of employees, government non-market activity	4010	////
Fringe benefits as wages/salaries	4013	----
30.1 Wages and employer contributions	4015	LGAG
31.2 Pensions expenditure	4016	PUDG
31.9 Other staffing costs	4017	AUDG
33.1 Income from holdings	4030	INKI
33.2 Interest etc. on current assets	4031	RIOM
33.9 Other income in the form of interest or dividends	4032	RIFA + UDFA
34. Interest expenditure	4040	RUDG
35.1 Corporation tax (for corporations only, of course)	4041	SSAR
35.1 Corporation tax SLS-E	4042	----
36. Profit/loss for tax purposes	4043	AARE
37. Distributed income (dividends)	4044	UDBY
38. Tax adjustments	4045	----
39.1 Net insurance premiums	4046	EKUD (part of)
39.2 Contributions to fighting funds	4047	EKUD (part of)
Writing off and writing down:		
Consumption of fixed capital, government non-market activity	5000	////
40. Writing off and writing down of non-financial fixed assets	5100	ANMI
41. Writing down of non-financial current assets	5200	NOAK
42. Writing down of financial assets	5300	NFAO
Capital formation, RESOURCES, purchases of:		
Own-produced software (= output: 1015)	6101	----
Purchased software	6102	TIAA (part of)
Exploratory drilling	6104	----
50. Intangible assets	6110	TIAA (part of)
51.1 Real estate, existing buildings (including land value)	6121	KEB
51.2 Real estate, unbuilt land	6122	KUBG
51.3 Real estate, expenditure on construction, new buildings (excluding land value)	6123	OPNY
51.4 Real estate, rebuilding, improvement of buildings and installations	6124	OFBB
51.5 Real estate, new layout and rebuilding of roads, harbours, etc.	6125	VHPK

51.6 Breeding stock	6127	////
<i>51.9 Other real estate</i>	<i>6126</i>	<i>////</i>
52.1 Operating resources, plant and machinery	6131	----
53.1 Operating resources, transport equipment, vehicles	6132	----
<i>53.2 Operating resources, other transport equipment</i>	<i>6133</i>	<i>----</i>
<i>54.1 Other operating resources</i>	<i>6134</i>	<i>DTAM + TAAD</i>
55. Net acquisitions of valuables	2055	----
Capital formation, USES, sales of:		
Disposals of software	6202	AIAA (part of)
60. Intangible assets	6210	AIAA (part of)
61.1 Real estate, existing buildings (including land value)	6221	SABY
61.2 Real estate, unbuilt land	6222	SUBG
61.3 Real estate, roads, harbours, squares, etc.	6223	SVHP
61.4 Breeding stock	6227	////
<i>61.9 Other real estate</i>	<i>6226</i>	<i>----</i>
62.1 Operating resources, plant and machinery	6231	----
63.1 Operating resources, transport equipment, vehicles	6232	----
<i>63.2 Operating resources, other transport equipment</i>	<i>6233</i>	<i>----</i>
<i>64.1 Other operating resources</i>	<i>6234</i>	<i>STAM + SADI</i>
Balancing items (including inventories) ASSETS:		
70. Intangible fixed assets	8110	IAAT
71.1 Land and buildings	8120	GRBY
71.2 Technical plant and machinery	8121	ATAM
71.3 Other structures, working plant and equipment	8122	AADI
<i>71.9 Other tangible fixed assets (e.g. advance payments)</i>	<i>8129</i>	<i>FMAA</i>
72. Financial fixed assets	8130	ABAE + ABOA + FAAT + TILG
73.1 Opening stocks	8141	PVBT
73.2 Closing stocks	8142	UVBT
Balancing items, LIABILITIES:		
81. Own funds	8210	EGUL
82. Provisions	8220	HENS
83. Long-term debt	8230	ALG + LGL
84. Short-term liabilities	8240	AKG + KGL
<i>73.9 Other current assets</i>	<i>8149</i>	<i>ANTI + LIBE + OBAE + OBAV + OMAT + TGT + TSVT + UFKV + VKT + UIAF</i>

Key:

//// indicates that the item is not relevant or that it is fully covered in the other items included in the main group.

---- indicates that no breakdown is possible.

Sources:

- AUER, OMS, HOMS etc. are the variable names in the industrial accounts statistics, which for the year 2003 covers DK-NACE industries 140000-370000, 450000-550000, 602223-640000, 701109 and 710000-740000.
- EKUD = other external expenditure divided by ANVID [identity code for use] on the basis of the survey of costs.
- DEFL = Deflation division.

As mentioned earlier⁹, the item “Other external expenditure”, EKUD, from the accounts statistics have already in this stage been split between various items of which some should be included in intermediate consumption while others e.g. losses on bad debts or other taxes on production should be excluded.

It should also be noted that estimates for units under threshold value have already been included as part of the calculations in the accounts statistics system.

In spite of the level of detail, various accounting items still do not correspond to national accounts concepts in the first version of the intermediate system because information from accounts alone is insufficient to perform the full transition.

⁹ ln 3.123

Intermediate system 2

A second – and final – version of the intermediate system is the result of a number of corrections to the first version of the system. These corrections include:

On the supply side:

- 7) Production in the hidden economy.
- 8) Fringe benefits produced from own production.
- 9) Revenue from licenses and royalties.
- 10) Software produced on own-account.
- 11) Entertainment, literary and artistic originals
- 12) Price correction of changes in inventories of finished goods, work in progress and goods for resale.

On the uses side:

- 17) Fringe benefits purchased
- 18) Financial intermediation services paid for directly.
- 19) FISIM
- 20) Correction for net insurance premiums
- 21) Public fees
- 22) Expenditure on licences and royalties
- 23) Software produced on own-account
- 24) Purchased software
- 25) Price correction of changes in inventories of raw materials.
- 26) Small tools etc.

Ad 1) Production in the hidden economy:

A description of the calculation of production in the black economy can be found in chapter 7. In the intermediate system production in the black economy is broken down by the detailed industries used here.

Ad 2) Fringe benefits produced from own production.

A description of the calculation of the value of fringe benefits can be found in chapter 7. The correction on the supply side is done to take into account that fringe benefits that are produced inside the unit itself will not be recorded in the value of output according to the business accounts. An estimated value of the missing production will have to be added to the production value in these cases. It should be emphasized that this correction is irrelevant in the cases where fringe benefits consist of goods or services purchased from other units.

Ad 3) Revenue from licenses and royalties.

According to the ESA 95, payments for licences and royalties on patents etc. are payments for the provision of services which have to be included the estimate of output and intermediate consumption. In business accounts, they will in many cases be counted differently, as acquisitions of intangible assets, for example, even though all that has been acquired is permission to use an intangible asset for a given period and not the asset itself. In the national accounts, therefore, allowances are added in for licence and royalty payments as regards both intangible non-produced assets (patents etc.) and intangible produced assets (entertainment, literary and artistic originals, etc.). Licence payments for software are already covered elsewhere. These values are recorded in

intermediate system 2 and included in output and intermediate consumption when the MTM is compiled.

Experience shows that accounting practises vary from firm to firm. Many enterprises show revenue from royalties as part of their output value. In these cases estimated values of the revenues already included are subtracted from the total revenue from royalties when the correction is made.

Ad 4 and 13) Software produced on own-account.

In Danish business accounts, own-produced software is not normally capitalised but is considered as current operating expenditure (wages and salaries and the consumption of goods and services). If it is capitalized, “industrial accounts statistics” will usually show it as part of “intangible assets” where it cannot be distinguished from other kinds of intangible assets (some of which are not part of fixed capital). An allowance therefore has to be added to the business accounts' value of the output of capital goods for own use, to include the value of software (and large databases) produced on own account and for own use.

In the national accounts, own-produced software is calculated in a subsystem which, *inter alia*, includes a breakdown by industry. The calculation is based on total wages and salaries for highly-qualified IT staff, divided by industry. The values for own-produced software are input into the intermediate system and are thus included in the *Target Total Module (MTM)*. The calculation is performed for the industries used in the Danish supply and use tables. In the intermediate system the correction is blown up to the detailed industries used here. The estimated value of software produced at own-account is also coded as GFCF on the expenditure side.

Ad 5) Entertainment, literary and artistic originals.

In the business accounts of authors, artists etc, the value of the originals they create will usually not be counted as output of capital goods. To bring the accounts for these producers into line with the ESA 95 rules, own output of originals must be estimated separately and added to the business accounts output. Similarly, the amount calculated has to be added to GFCF on the expenditure side.

6 and 15) Price correction of changes in inventories.

The price correction for changes in inventories is made separately for the following five inventory categories:

- (1) Finished goods and work-in-progress
- (2) Inventories of raw materials
- (3) Wholesale inventories
- (4) Retail inventories
- (5) Special inventories.

The starting point is the accounting statistics information on final stocks in the last year (= opening stocks in the present year) and final stocks in the present year. These inventory estimates use the firms'/producer units' own valuation, which in the majority of cases is based on historic cost. Changes in inventories in business accounts which are calculated as closing minus opening stocks will therefore, with inflation (or deflation), generally include an element of revaluation. When prices are rising, output (sales plus changes in inventories of finished goods) will be overvalued and the intermediate consumption of goods will be undervalued. Together these will lead to an overvaluation of value added if the changes in inventories as they appear in business accounts are not price-corrected. For trading industries, where output value is defined as gross margin (sales of

goods for resale minus consumption of goods for resale), output and value added will be overvalued if prices rise and inventories of goods for resale are not price-corrected.

The national accounts use the best possible approximation of the theoretically correct estimate of the national accounts changes in inventories and the price correction that goes with them according to the PIM. Owing to a lack of information on daily movements in inventories, the PIM can only be used in exceptional cases, in Denmark as in other countries. The Perpetual Inventory Method consists in compiling initial stocks and then monitoring all movements into and out of them.

Where information is available on physical quantities of goods in stock at the beginning and the end of the accounting period, the best possible approximation is obtained by multiplying the physical change in the inventory for the individual goods over the period in question by the mean prices for the year and then summing over all goods in the inventory in question. In Denmark, this information on physical quantities is available for agricultural and energy goods.

In all other cases, the only available information is the *value* of the enterprises' stocks at the end of the period in their annual accounts (quarterly accounts) and in the accounting statistics. Opening stocks are the same as the closing stocks of the previous accounting period. To calculate the national accounts changes in inventories, we make an *assumption* about the prices at which stocks are estimated at the end of the period and on this basis inflate the opening stocks to the year's average price level, likewise deflating closing stocks to the year's average price level. The national accounts change in inventories in current prices can then be calculated as the difference between opening stocks and closing stocks calculated at average prices for the year in question.

The price correction to the business accounts' changes in inventories, output and intermediate consumption is worked out as the difference between the change in inventories in business accounts and the change as estimated according to national accounts principles. In the Danish national accounts, closing stocks are assumed to be compiled at the latest noted end-of-year acquisition prices, which are assumed to be the mid-December prices. This method of estimating stocks is compatible with the Annual Accounts Act and is known to be used by many producer units because it is simple and practicable. Given this assumption, the figures are inflated from the price level in December t-1 to the mean price level for year t and deflated from the price level in the December of year t to the mean level in year t. The calculation is made at product level, with opening and closing stocks divided by product on the basis of a distribution key specific to each industry. For inventories of finished products, including work-in-progress, the distribution key is the distribution by product of sales in the latest final year (t-1). For inventories of goods for resale, a key is used which provides the link between wholesale and retail trade industries and the products in which they trade. Finally, the distribution key for stocks of raw materials is determined by the breakdown of intermediate consumption by product according to the balanced supply and use tables for the latest final year.

The following formulae show the calculation process for the change in inventories of individual products. The change for a given industry is then worked out by summing over products:

$$C = B - A$$

$$D = \frac{B}{p(t(12))} p(t) - \frac{A}{p(t-1(12))} p(t)$$

$$E = D - C$$

where A = value of opening stocks in line with business accounting principles
 B = value of closing stocks in line with business accounting principles
 C = value of change in inventories in line with business accounting principles
 D = value of change in inventories in line with national accounts principles
 E = price correction to change in inventories and output/intermediate consumption
 p(t-1(12)) = price index for December year t-1
 p(t) = mean price index for year t
 p(t(12)) = price index for December year t.

The national accounts change in inventories, i.e. the product transaction P.52, is then obtained as $P.52 = C + E$. E is item K.11 in the revaluation account for asset category AN.12, inventories, apart from the price change between mid-December in year t and the end of December in the same year. When inflation is low and there is little fluctuation in the relative prices, this last figure can be ignored for practical purposes, so E can be considered as the revaluation or holding gain on the inventory during the year.

It is important to be aware of the risk of omissions and double counting when two methods of calculating inventories are used at the same time, one based on physical quantities of certain goods and another based on business accounts. For example, the calculated inventories of energy goods are posted in the accounts for producers of energy products (stocks of finished goods), distributors of energy products (stocks of goods for resale in wholesaling enterprises) and, finally, as stocks of raw materials.

The Danish national accounts calculation system for inventories includes a key which allocates those agricultural and energy products which are covered by the physical calculation to certain industries, from which they are subtracted in the calculation based on the value of inventories according to accounting statistics. This ensures consistency, i.e. all inventories and movements in inventories in the economy are included once and once only.

Finally, it may be noted in parentheses that the theoretical and practical problems which arise in the non-financial national accounts in connection with estimating changes in inventories and revaluing inventories have their counterpart in the financial national accounts, where the problem is how to split the change between opening and closing stocks of financial assets into a financial transactions share and a revaluation share, plus "other volume changes", i.e. bankruptcies etc.

Ad 7) Fringe benefits purchased.

The description of the calculation of the value of fringe benefits can be found in chapter 7. Where the value of fringe benefits consists of outlays for telecommunications services, subscriptions for

newspapers and the like that are purchased in the market, business accounts will include this expenditure in the purchases of goods and services. This expenditure should be removed from the value of inputs and added to compensation of employees. Estimates for fringe benefits are compiled for the industries shown in the Danish supply and use tables. In the intermediate system they are distributed over the detailed industries used in this system.

Ad 8) Financial intermediation services paid for directly.

In business accounts, fees, including commitment fees etc. paid to financial institutions, are normally counted under financing expenditure, along with interest expenditure etc. In the main, financing expenditure covers distributive transactions and should not be included in the estimate of intermediate consumption, which is a product transaction (P.2). In the national accounts, the financial expenditure item therefore has to be screened for purchases of services consisting of bank fees etc. and those purchases transferred to an accounting item which goes into the estimate of intermediate consumption.

In the national accounts calculation system for financial institutions, an estimate is made of financial intermediation services which are paid for directly, in a breakdown by certain types corresponding to the financial institutions involved - cf. Section 3.16. In this calculation system, the total is divided up among users on the basis of the available information, including the size of borrowing and lending from/to industry groups and households as consumers plus the rest of the world.

The values calculated for payments for bank services etc. are input into intermediate system 2, thus ensuring that they are included in the estimate of intermediate consumption when the target total module is calculated.

Ad 9) FISIM.

Intermediate consumption of FISIM is an imputation that obviously does not exist in business accounts. The method used for distribution of input of FISIM by industry is explained in chapter 9: FISIM.

Ad 10) Correction for net insurance premiums.

As discussed in Section 1.3.4.5, there is here, with good reason, a difference between the accounting principles in business accounts and in national accounts. In national accounts terminology, the insurance premium actually paid on a policy is called the "gross insurance premium". That share of the gross premium which goes to cover risks, i.e. the payment of claims and allocations to provisions, which are the policyholders' property, is referred to as the "net insurance premium". The difference consists of the actual payment for the services of the insurance corporation, a share known as the "services element in the gross premium". In addition to the premium *actually* paid, there is, however, a further component of the total premium, namely the returns which the insurance corporations earn from insurance technical reserves, which, as already stated, are money belonging to policyholders. These returns are known as "supplementary premiums". In the national accounts, the amount is counted as a flow of property income (D.44) to the insurance policyholders, who use the amount in question to buy insurance services in addition to those paid for via the actual insurance premium. The economic argument is that this is the way insurance corporations operate. One essential aspect of insurance business is that the corporations should have clients' funds at their disposal in the insurance technical reserves. The supplementary premiums are therefore included in the insurance corporations' output value.

The calculations for insurance corporations and pension funds are discussed in detail in Section 3.16. Here, therefore, we discuss only those corrections which are needed to work out intermediate consumption in those enterprises which are part of the population of policyholders.

In business accounts, the gross insurance premium is included in the accounting item "other external expenditure" (other overheads). To enable this to be used as the basis for an estimate of intermediate consumption, the net insurance premium has to be deducted and the supplementary premiums added.

In the national accounts insurance calculation system, gross premiums, claims paid out, net insurance premiums and supplementary premiums are estimated for each main type of insurance. After these have been aggregated by type of insurance, they are available in a breakdown over the national accounts 130 industries, plus households as consumers and the rest of the world. The net insurance premiums calculated plus the additions for supplementary premiums are input into intermediate system 2, and thus the treatment of insurance transactions is brought into line with the ESA 95 rules with the compilation of the target total module (MTM).

Ad 11) Government fees.

According to the ESA 95, paragraph 4.23 e), government fees and payments connected with checks carried out by government are to be considered as purchases of services unless the amount charged is out of all proportion to the costs of the check. In business accounts, they will normally be considered as direct taxes rather than purchases of services, and will thus not be included in intermediate consumption unless a correction is made. Information on government fees, taxes paid for checks etc. is obtained from tax statistics. In a special calculation system, the figures are then broken down by industry, with the result being input into the intermediate system and included in intermediate consumption for the estimate of the MTM.

Ad 12) Expenditure on licences and royalties.

According to the ESA 95, payments for licences and royalties on patents etc. are payments for the provision of services which have to be included the estimate of output and intermediate consumption. In business accounts, they will in many cases be counted differently, as acquisitions of intangible assets, for example, even though all that has been acquired is permission to use an intangible asset for a given period and not the asset itself. In the national accounts, therefore, allowances are added in for licence and royalty payments as regards both intangible non-produced assets (patents etc.) and intangible produced assets (entertainment, literary and artistic originals, etc.). Licence payments for software are already covered elsewhere - cf. f) above. These values are recorded in intermediate system 2 and included in output and intermediate consumption when the MTM is compiled.

Ad 14) Purchased software.

Some years ago, purchased software was not normally capitalised in Danish business accounts unless it was purchased in connection with investment in IT-hardware. Annual reports from recent years show considerable amounts of software as GFCF in intangible assets. Software that is not capitalized is probably included in acquisitions of equipment, expensed, and a small share will probably still be indistinguishable from other external expenditure. Part of the value of purchased software, which, according to the ESA 95, has to be counted as gross fixed capital formation, therefore has to be deducted from the operating expenditure items in the business accounts which

cover purchases of goods and services. As the industrial accounts statistics does not distinguish between investment in different types of intangible assets an independent estimate on GFCF in purchased software have been established.

In the national accounts, purchased software is calculated in a subsystem which, *inter alia*, includes a breakdown by industry. The calculation is made from the resources side on the basis of product statistics for the IT industries. The total domestic supply of purchased software for the industries thus calculated is distributed by industry on the basis of a key which, *inter alia*, depends on the number of computers in the individual industries. To some extent, the key is an approximation, for want of expenditure-based information on software purchases. The uncertainty about the distribution by industry within market industries does not, however, affect GNI, and the total for the economy as a whole may be said to be based on reasonably solid foundations.

The values in the subsystem are input into the intermediate system, with purchased software deducted from the business accounts' purchases of goods and services for the estimate of intermediate consumption in the target total module. In the intermediary system the correction is distributed by the detailed industries used here.

Ad 16) Small tools etc.

Acquisitions of equipment etc. that in business accounts is treated as current expenses or written off in the same accounting year will to a large extent consist of durable equipment that should be included in GFCF unless the purchases are below the threshold for "small tools" according to ESA 95.

According to ESA 95, paragraph 3.70 e), producers' purchases of durables with a (total) order value of under ECU 500 in 1995 prices should be treated as intermediate consumption and not as gross fixed capital formation.

The tax legislation includes an equivalent rule on consumables which may be posted as operating expenditure, i.e. written off immediately. It has been assumed for national accounts purposes that the accounting statistics information on expenditure on small tools and the like has usually been reported according to the tax rules in business accounts. (It must, however, be admitted that business accounts show numerous examples of expenses that are delimited in ways that do not at all follow the tax rules). Since tax rules are different from the ESA rules, the accounting item has to be split into that part which, according to the ESA rules, is small tools, and has to be counted as intermediate consumption, and the remaining share which goes to capital formation. In the Danish national accounts, a method has been developed for making this split on the basis of the tax rules and assumptions about the division of purchases by amount.

The limits for tax purposes on amounts spent on consumables which can be written off immediately were adjusted upwards several times. This meant that that share of the "acquisition of equipment, expensed" item which had to be counted as intermediate consumption in the national accounts had to be reduced and the capital formation share had to be increased. It must, however, be assumed that some of these acquisitions still will have to be treated as small tools according to ESA95. In 2003 small tools were assumed to account for 12% of these acquisitions.

3.4 The roles of direct and indirect estimation methods

A direct estimate of value added in a given industry is understood to mean that, on the basis of exhaustive accounting statistics for the industry in question, output and intermediate consumption, and thus value added, can be obtained via the statistical processing of the underlying business accounts.

Since 1995 the coverage of the industrial accounts statistics has increased. In 1999 and 2003 it covered 49% and 54% of value added respectively. This is to be compared with 27% coverage of value added in 1995.

The main industry for which an indirect estimate of value added is used is for NR [national accounts] industry 702040, the letting of non-residential buildings etc, where output is calculated from the expenditure side as the sum of the rental expenditure of all other industries and where intermediate consumption is calculated using the input percentage (intermediate consumption/output value) for the letting of dwellings (i.e. actual letting) in industry 702009, dwellings, for want of satisfactory accounting information on the letting of non-residential buildings. Since the two activities are closely related, the uncertainty regarding the calculation of value added is assumed to be minor.

Table 3.17, which is based on the process table in annex 9, shows that indirect estimation methods account for approximately 6 percent of gross value added.

Table 3.17 Share of gross value added, direct versus indirect methods of estimation

Method of estimation	Gross value added, DKK mill.	%
Direct estimation	1.134.117	94,4
Indirect estimation	66.954	5,6
Total	1.201.071	100,0

Note: Indirect estimation are from the columns "CFM and ratios", "Other E&M" and "Other" from the process table.

3.5 The roles of benchmarks and extrapolations

"Direct estimates of levels" is understood to mean estimates of value added of industries where the level of both output and intermediate consumption is calculated each year as a level on the basis of accounting statistics or via an indirect calculation. Projections are taken to be estimates where output and intermediate consumption are calculated directly as levels for a benchmark year, whilst estimates for the current years are obtained by projecting output and intermediate consumption from the benchmark year using appropriate indicators. A more uncertain method of projection consists in assuming a constant ratio (input percentage) of intermediate consumption to output in either current or (better) constant prices and projecting output, intermediate consumption and implicitly value added using a single indicator.

In the final Danish national accounts, virtually all value added is based on current-year estimates produced directly as levels. In the final calculations, projections are used in only three areas:

- 1) housing (dwellings)
- 2) a minor share of value added in NPISHs
- 3) the allowance for underreporting etc. and for hidden activity ("work in the black economy").

Housing is an extremely important industry for the whole of the economy. In this area, an extensive benchmark calculation was carried out for 1999 which has been projected to 2003 - cf. description of the benchmark calculations in Section 3.17.

As regards the second point, i.e. non-profit institutions serving households, by far the largest share of value added, namely total wages and salaries, is calculated as a level every year, whilst projections are used only for the minor components, capital consumption and other taxes less subsidies on production.

Moving on to the third point, Denmark, like other countries, has neither the statistical sources nor resources to produce a new estimate of the hidden economy every year. In most cases, it has been decided to use a benchmark which is then projected. In Denmark's case, the benchmark year for the estimate of the hidden economy is 2004. The method then is to project output and value added linked to the black economy by assuming for each "product" in that economy that the changes run in parallel with domestic output in the corresponding "legitimate" product balance.

Table 3.18, which is based on the process table in annex 9, shows that projections from a benchmark account for approximately 9 percent of gross value added.

Table 3.18 Share of gross value added estimated as a level as opposed to being projected

Method of estimation	Gross value added, DKK mill.	%
Annual estimates, levels	1.088.733	90,6
Projected from benchmark	112.338	9,4
Total	1.201.071	100,0

Note: Projected from a benchmark are from the columns "Benchmark extrapolations", "CFC(PIM) & imputed dwellings" and "Explicit exhaustiveness" from the process table.

3.6 The main approaches taken with respect to exhaustiveness

The main initiative aimed at ensuring that coverage is exhaustive consists primarily of the very important work being carried out to ensure that the business register is updated to include new producer units. This work is made easier by the fact that the threshold values in the VAT and tax systems are extremely low, so that all regular economic activity, apart from that which counts as a hobby and is insignificant, currently has to be registered in a public administrative register which feeds into the business register. It is difficult to overstate the importance of this rapid register updating for the quality and degree of coverage of the national accounts. It is estimated that all regular economic activity, apart from that which is in the form of a hobby and is insignificant, is captured via use of the business register. As regards employees in private households, who, by their very nature, are very seldom included in the business register, by far the largest share of this activity

is in the hidden economy, and all such activity is estimated via a special calculation not based on the business register.

Fringe benefits and irregular economic activity such as underreporting and hidden activity are covered by corrections which are explicit wherever possible. These are based on the principles of Commission Decision 94/168/EC, Euratom, the "exhaustiveness decision" and are described in detail in chapter 7.

In addition, Statistics Denmark includes for the purpose of the "fourth on resource" the value added resulting from illegal activity which according to ESA95 is part of the production boundary. The calculation and correction are described in chapter 7 and 8.

3.7 Agriculture, hunting and forestry (NACE rev. 1: A)

Introduction

NACE Section A is defined by function and comprises four of the national accounts' 130 industries, namely:

011009	Agriculture
011209	Horticulture, orchards, etc.
014000	Agricultural services*
020000	Forestry

It covers 23 industries at the most detailed DK-NACE level. In 2003, this NACE Section accounted for 1.8% of total value added of the Danish economy - cf. Table 3.19.

Table 3.19 NACE Section A's contribution to the gross value added of the economy

Industry	Output	Intermediate consumption	Value added at basic prices
011009 Agriculture	46 208	31 121	15 087
011209 Horticulture, orchards etc.	4 199	2 272	1 927
014001 Machine pools	6 749	3 495	3 254
014002 Landscape gardeners	785	479	306
020000 Forestry	2 934	1 474	1 460
Total NACE A	60 875	38 841	22 034
Percentage of the economy	2.6	3.4	1.8

Statistical sources

The primary statistical sources underlying the estimate of value added can be seen in the table 3.20.

* The literal translation would be "machine pools, landscape gardeners etc. "

Table 3.20 Statistical sources underlying the calculation of value added for NACE A

National accounts industry	Source
011009 Agriculture	Specific industry statistics: agricultural statistics
011209 Horticulture, orchards etc.	Specific industry statistics: agricultural statistics
014000 Agricultural services (part), machine pools	SLS-E statistics
014000 Agricultural services (part), landscape gardeners (market producers)	SLS-E statistics
014000 Agricultural services (part), landscape gardeners (non-market producers)	General government statistics
020000 Forestry	Specific industry statistics and SLS-E statistics

The statistical source for agriculture, horticulture and the raising of fur animals (national accounts industries 011009 and 011209) is Statistics Denmark's agricultural statistics. This statistics follows the guidelines for compiling accounts for agriculture and forestry laid down in regulation 138/2004. This implies that the compilations are made at the level of local KAUs, which means that products for own use and internal sales within agriculture are included.

The national accounts uses the so-called "national farm" method, which implies that only sales from the agricultural sector, lumped together, and purchases which go to the agricultural sector are included in the estimate. Internal sales and purchases between agricultural enterprises are not included. Therefore corrections are made for internal use in the national accounts. This has no effect on value added.

According to paragraph 3.58 of ESA 95, the output of crop products should be estimated not at harvest time but continuously over the entire period of growth. In Denmark, the vast majority of crops are harvested in the year in which the crop grows. The exception is winter cereals (winter wheat and barley), which are sown the year before the harvest. However, plant growth up to the year end is so minimal that for practical purposes it can be ignored. In the annual accounts, there is therefore no need to correct stocks as estimated after the harvest.

The agricultural statistics do not cover landscape gardeners, the market share of which is instead covered by SLS-E statistics, with the non-market share taken from general government statistics.

The estimates in the agricultural statistics include machine pools, which in the national accounts come under 014000, agricultural services. A correction is therefore made so that this activity is excluded. In the national accounts, agricultural services (machine pools) are calculated separately on the basis of the SLS-E statistics.

The statistical sources for agricultural services and landscape gardeners (014000) are the SLS-E statistics and general government statistics.

For forestry (020000) the statistical sources for calculating output are the forest census and a sample-based national forest inventory undertaken by Statistics Denmark and the Danish Forest and Nature Agency. For intermediate consumption, the input structure from the SLS-E statistics is used.

Method of calculation

In agriculture and horticulture output is normally calculated using a price times volume method. For the largest crop product, namely cereals, the harvest yield of the individual kinds of cereal is calculated first of all, and this is then multiplied by the average selling prices collected from all the larger cereal merchants. For animal products, sales value is calculated in a similar way by multiplying the quantities sold by the average selling prices obtained by the producers. The value of changes in inventories and livestock numbers, as well as output for own use, is added.

Expenditure on intermediate consumption in agriculture and horticulture is total expenditure on the raw and auxiliary materials used in production, including purchases from dealers and the like, expenditure on the repair and maintenance of the production apparatus and various expenditure on services from other industries. If information is available on the quantities and prices of the raw and auxiliary materials used, the expenditure is calculated on the basis of total purchases and average prices paid for the individual raw and auxiliary materials, whilst for the other expenditure items, information from the available accounting estimates and various special estimates is used.

In forestry, output is also calculated using a price times quantity method. The value of production of timber is the value of annual rise in volume of standing timber, i.e. in addition to the fellings, we also account for the net natural growth in the volume of standing timber. In forestry, intermediate consumption is calculated using the input structure from the SLS-E statistics.

Breakdown of output by product

Since agriculture, horticulture and the rearing of fur animals are activity-defined on the basis of the products produced and the estimate of output value using a price times volume method, the product breakdown is self-evident. Output in agriculture and horticulture, other than landscape gardeners, is divided into 49 product balances in the national accounts supply and use tables.

For forestry, the breakdown by product follows the calculation of the annual rise in volume of standing timber and is therefore based on the breakdown in the sample-based forest inventory.

Breakdown of intermediate consumption by product

In the agricultural statistics, the vast majority of intermediate consumption is allocated directly by product, in most cases on the basis of information on quantities of the products used (e.g. fodder cereals) multiplied by average prices or information on sales to agricultural holdings (feedingstuffs, fertilisers and pesticides).

3.8 Fishing (B)

Introduction

NACE Section B is defined by group of producer units and covers one of the national accounts' 130 industries, namely 050000 fishing. It covers two industries at the most detailed DK-NACE level, namely:

050100	Fishing
050200	Operation of fish hatcheries and fish farms.

This section accounted for 0.1% of value added of the Danish economy in 2003 - cf. Table 3.21.

Table 3.21 NACE Section B's contribution to the gross value added of the economy

Industry	Output	Intermediate consumption	Value added at basic prices
050000 Fishing	3 936	2 157	1 779
Total NACE B	3 936	2 157	1 779
Percentage of the economy	0.2	0.2	0.1

Statistical sources

The primary statistical sources underlying the estimate of value added can be seen in Table 3.22.

Table 3.22 Statistical sources underlying the calculation of value added for NACE B

National accounts industry	Source
050000 Fishing (value added)	SLS-E statistics
050000 Fishing (product breakdown)	Ministry of Fisheries: fish landings

Method of calculation

Value added is calculated by the standard method for industries covered by the SLS-E statistics - cf. Section 3.1.4.

Breakdown of output by product

The output value calculated is broken down by type of fish on the basis of the Fisheries Ministry's catch statistics, which cover landings in both Danish and foreign ports. The output value according to the national accounts calculations is much higher than the value of the quantities of fish landed. The difference can be explained partly by internal deliveries of fish in the fishing industry (in fact, a trading activity) and partly, perhaps, by avoidance of the fish quotas by means of unofficial landings. Estimated internal deliveries are posted as inputs for the fishing industry itself when the supply and use tables are compiled.

Breakdown of intermediate consumption by product

There are no continuous cost structure surveys for fishing. The input structure is based on information on the structure of costs which can be found in the SLS-E accounting plan up to 1990 and annual information on the consumption of energy in energy statistics.

3.9 Mining and quarrying (C)**Introduction**

NACE Section C is defined by grouping of producer units and covers two of the national accounts' 130 industries, namely:

- 110000 Extraction of crude petroleum etc.
- 140009 Extraction of gravel, clay, salt, etc.

These in turn cover 16 industries at the most detailed DK-NACE level. In 2003, this section accounted for 2.5% of value added of the Danish economy - cf. Table 3.23.

Table 3.23 NACE Section C's contribution to gross value added of the economy

Industry	Output	Intermediate consumption	Value added at basic prices
110000 Extraction of crude petroleum etc.	33 864	4 757	29 108
140009 Extraction of gravel, clay, salt etc.	2 416	1 306	1 110
Total NACE C	36 280	6 063	30 218
Percentage of the economy	1.5	0.5	2.5

Statistical sources

The primary statistical sources underlying the estimate of value added can be seen in Table 3.24.

Table 3.24 Statistical sources underlying the calculation of value added for NACE C

National accounts industry	Source
110000 Extraction of crude petroleum etc.	Business accounts (all units) and industrial accounts statistics
140009 Extraction of gravel, clay, salt etc.	Industrial accounts statistics

Industry 110000, the extraction of crude petroleum etc, covers all activity relating to the production of crude petroleum and natural gas, which is concentrated in the Danish sector of the North Sea. The output of petroleum and gas is estimated ex-North Sea, i.e. the value of pipeline transport is included in the output value. Pipeline transport is operated by a single publicly owned and controlled corporation, DORAS, which is part of national accounts industry 602409, freight transport by road and via pipelines. No further distribution or processing is included in the output value. The pipeline tax of 5% of the value of the oil transported, which has to be remitted to the government, is considered as a product tax on pipeline transport services. The output value of DORAS, plus the pipeline transport tax, is posted as intermediate consumption in the "extraction of crude petroleum etc." industry.

The industry covers *Dansk Undergrunds Consortium* (DUC) and other licence holders and Statistics Denmark collects very detailed accounting information from them. In addition, the industry covers technical service activity related to the extraction of crude petroleum. This activity is covered by industrial accounts statistics.

Industry 140009, the extraction of gravel, clay, salt etc, is covered by industrial accounts statistics.

Method of calculation

The output value of 110000, i.e. the value of the volume of oil and gas produced, is taken directly from the accounts divided into these two products. Exploratory drilling for own account is also taken from the accounts.

Exploratory drilling by the units in the industry on their own account is included in the industry's output value. This output is not transferred to construction. Exploratory drilling etc. which is purchased comes either from domestic suppliers in the construction industry or is imported. All exploratory drilling is capitalised, i.e. is treated as gross fixed capital formation in the national accounts.

The output value of 140009 is taken directly from the industrial accounts statistics, which is grossed up to cover all producer units in the industry. Intermediate consumption is calculated by the standard method for the transition from the accounting statistics accounting plan to the target total module via the intermediate system.

Breakdown of output by product

The output of the extraction of crude petroleum etc. is broken down directly into four products: crude petroleum, unprocessed natural gas, technical service activity and exploratory drilling. The extraction of gravel, clay, salt etc. industry is covered by product statistics for manufacturing. The output calculated is divided by product on the basis of the breakdown in the industrial commodity statistics. In addition, the industry produces fringe benefits and own account software.

Breakdown of intermediate consumption by product

In the extraction of crude petroleum etc, operating expenditure is divided in the accounts into input of pipeline transport services (DORAS + oil pipeline tax), repair and maintenance and other operating expenditure. These first two together cover by far the greater share of intermediate consumption. In the national accounts supply and use tables, the remainder is broken down by product, using rough figures in some cases.

3.10 Manufacturing (D)

Introduction

NACE Section D is defined by group of producer units and covers 55 of the national accounts' 130 industries - cf. Table 3.24. In the detailed DK-NACE, manufacturing consists of 322 industries, each of which is calculated separately when the primary statistics are processed.

In 2003, this section accounted for 15.0% of value added of the Danish economy - cf. Table 3.25.

Table 3.25 NACE Section D's contribution to the gross value added of the economy

Industry	Output	Intermediate consumption	Value added at basic prices
151000 Production etc. of meat and meat products	37 319	28 215	9 105
152000 Processing etc. of fish and fish products	9 539	7 626	1 913
153000 Processing etc. of fruit and vegetables	3 920	3 015	905
154000 Manufacture of vegetable and animal oils and fats	2 695	2 323	372
155000 Manufacture of dairy products	24 005	19 676	4 329
156009 Manufacture of starch products	23 032	17 978	5 054
158109 Manufacture of bread, cake and biscuits	5 261	3 318	1 943
158120 Bakers' shops	3 761	1 836	1 925
158300 Manufacture of sugar	2 685	1 938	748
159000 Manufacture of beverages	10 045	6 721	3 324

160000	Manufacture of tobacco products	4 340	2 226	2 114
170000	Manufacture of textiles	7 559	4 898	2 661
180000	Manufacture of wearing apparel	4 090	2 967	1 124
190000	Manufacture of leather and leather products	722	541	181
200000	Manufacture of wood and wood products	13 352	8 218	5 135
210000	Manufacture of pulp, paper and paper products	10 170	6 323	3 847
221200	Publishing of newspapers	7 445	4 349	3 096
221309	Publishing activities, excluding newspapers	12 281	7 657	4 624
222009	Printing activities, etc.	12 765	6 902	5 864
230000	Manufacture of refined petroleum products etc.	14 752	14 477	274
241109	Manufacture of industrial gases and inorganic basic chemicals	904	457	447
241209	Manufacture of dyes, pigments and organic basic chemicals	5 342	3 411	1 931
241500	Manufacture of fertilisers	938	813	125
241617	Manufacture of plastics and synthetic rubber	483	353	130
242000	Manufacture of pesticides and other agro-chemical products	2 194	1 510	684
243000	Manufacture of paints, printing ink, etc.	3 103	2 302	801
244000	Manufacture of pharmaceuticals, etc.	32 932	17 509	15 423
245070	Manufacture of detergents and other chemical products	9 842	6 601	3 241
251122	Manufacture of rubber products and plastic packing goods	10 260	6 209	4 051
252300	Manufacture of builders' ware of plastic	2 119	1 331	788
252400	Manufacture of other plastic products n.e.c.	8 984	4 490	4 494
261126	Manufacture of glass and ceramic goods etc.	2 748	1 629	1 119
263053	Manufacture of cement, bricks, tiles, flags, etc.	2 424	1 307	1 117
266080	Manufacture of products of concrete, cement, asphalt, etc.	11 948	6 867	5 081
271000	Manufacture of basic ferrous metals	1 333	1 236	96
272030	First processing of iron and steel	2 472	1 724	748
274000	Manufacture of basic non-ferrous metals	2 834	2 088	747
275000	Casting of metal products	1 493	827	666
281009	Manufacture of construction materials of metal etc.	21 960	11 816	10 144
286009	Manufacture of hand tools, metal packaging etc.	14 816	8 010	6 807
291000	Manufacture of marine engines, compressors, etc.	19 757	11 527	8 230
292000	Manufacture of other general purpose machinery	19 654	11 830	7 823
293000	Manufacture of agricultural and forestry machinery	5 203	3 535	1 668
294009	Manufacture of machinery for industries etc.	15 541	9 108	6 433
297000	Manufacture of domestic appliances	3 729	2 333	1 396
300000	Manufacture of office machinery and computers	2 590	1 747	843
310000	Manufacture of electrical machinery and apparatus	29 279	20 917	8 362
320000	Manufacture of radio and communication	12 139	8 276	3 863

equipment			
330000 Manufacture of medical and optical instruments etc.	17 701	8 448	9 254
340000 Manufacture of motor vehicles, etc.	6 791	4 500	2 290
351000 Building and repairing of ships and boats	6 551	4 214	2 337
352050 Manufacture of transport equipment excluding ships, motor vehicles etc.	2 246	1 421	825
361000 Manufacture of furniture	19 994	12 059	7 935
362060 Manufacture of toys, gold and silver articles etc.	4 331	2 522	1 809
370000 Recycling of waste and scrap	1 301	962	339
Total NACE D	515 675	335 093	180 585
Percentage of the economy	21.9	29.1	15.0

NACE Section D covers a much greater share of the national accounts' 130 industries than its share of value added of the economy because the input percentage, i.e. the ratio of intermediate consumption to output, is greater in manufacturing than in most other industries. This is due largely to specialisation, i.e. in many cases manufacturing enterprises buy semi-finished products from other manufacturing enterprises and concentrate on those parts of the total process where they have comparative advantages. Manufacturing thus accounts for a greater share of output (gross), of intermediate consumption and thus of the product flows in the economy than is the case if value added is the criterion.

For an optimum description of product flows in the economy in the supply and use tables and in the symmetrical input-output tables, manufacturing should be allocated a share of the number of industries covered by the calculation system which is greater than its share of value added.

Statistical sources

By far the most important primary statistics source underlying the estimate of value added is the industrial accounts statistics, the use of which in the national accounts was described in Section 3.1.4. Below, therefore, we discuss only statistical sources and the corresponding calculations which are not connected with the industrial accounts statistics. Table 3.26 gives an overview of manufacturing industries where the industrial accounts statistics are supplemented by other information for the national accounts' estimate of value added.

Table 3.26 Statistical sources underlying the calculation of value added for NACE D

National accounts industry	Source
151000 (part: coverage of all slaughtering)	Information from the Meat Inspectorate, Agricultural statistics
151000 (part: back payments)	Agricultural statistics
155000 (back payments)	Agricultural statistics
Other NACE D industries	Industrial accounts statistics

Method of calculation

The method of calculation for by far the largest share of manufacturing is the standard method for use of the industrial accounts statistics described in Section 3.1.4 Below is therefore only discussed the methods used for the sources listed in Table 3.25.

In 151000*, production etc. of meat and meat products, a correction is made first of all for slaughtering at public slaughterhouses [*slagtehus*] which are not classified as *slagterier* and home slaughtering. Where value added is concerned, this correction is extremely modest, since the value added consists only of the cost of the actual slaughtering. As regards the total output of meat, however, it is not insignificant, and is therefore important for the adjustment of the product balances for meat.

Much more important for value added is the other correction in the production etc. of meat, namely for the treatment of “back payments” to agriculture for the supply of animals for slaughter. In 2003, this correction amounted to DKK 1 363 million, which is the amount subtracted from the industrial accounts statistics’ uncorrected value added in the production etc. of meat when the figures were processed for national accounts purposes.

Many slaughterhouses [*slagterier*] in Denmark are organised on a cooperative basis, members of the cooperative being the farmers who supply to the slaughterhouses. When agriculture supplies animals to cooperative slaughterhouses, the farmers receive a payment on account based on the official prices for pigs, cattle, etc. When the slaughterhouses’ accounting results are worked out, a substantial share of the surplus is distributed to the suppliers as back payment over and above the original settlement price paid on account. It is these price adjustments to the suppliers’ settlement prices which are known as “back payments”. In agricultural statistics, the amounts in question are considered as part of the basic price and are therefore included in the output value of slaughter animals from the agricultural industry. In the slaughterhouses’ accounts and in the industrial accounts statistics, however, they are not counted as payment for goods, i.e. as intermediate consumption, but as profit, i.e. property income to the members of the cooperative. The national accounts’ correction for back payments corrects for the inconsistent accounting in the two sets of primary statistics. The national accounts comply with the agricultural statistics accounting and consider back payments as part of agricultural selling prices. The value added which they represent is therefore included in the national accounts under agriculture and not under meat production [*slagterier*]. Without the correction, agricultural back payments would be counted twice in total value added. The correction consists of reclassifying back payments in the accounts for the slaughterhouses [*slagterier*] from profit to intermediate consumption.

The correction for back payments in 155000, the manufacture of dairy products, is made in exactly the same way. There are a large number of cooperatives in the dairy industry, too, operating with back payments to suppliers, in this case the milk producers. The correction for back payments in the manufacture of dairy products was DKK 652 million in 2003.

Breakdown of output by product

For manufacturing, there are particularly comprehensive and detailed product statistics, namely the industrial commodity statistics (VS). These cover all producer units within manufacturing which have 10 or more employees. However, certain new units above this threshold will in many cases not be included in the statistics during the first year of their existence. On the other hand, they are always included in accounting statistics, either directly in the sample or indirectly through the grossing up on the basis of employment. Their output value is covered in full, but the breakdown by

* A literal translation of the Danish for 151000 would be simply "slaughterhouses etc.". But two words are used in this paragraph for "slaughterhouses". It would seem that there is a distinction between "*slagterier*", which are allowed to export, and "*slagtehus*", which may not.

product is not known in every case and therefore has to be estimated on the basis of the product distribution for other producer units in the same industry.

The product classification in the industrial commodity statistics is the Combined Nomenclature, which has some 10 000 headings. These are aggregated with the help of the national accounts' product file, which is a continuously updated key between the CN commodity codes and national accounts products (around 2 350 goods and services). From the national accounts products, there is a clear-cut link to the 4-digit level CPA.

For the vast majority of turnover in a given manufacturing industry, the breakdown by product is observed directly in the VS. For the remaining share up to total sales according to national accounts, two different methods are used for the product breakdown. In those cases where the enterprises not included in the VS must be assumed to produce the same kinds of goods as enterprises which are covered, the figures are simply grossed up on the basis of the VS product structure. In certain other cases, where the enterprises not covered are primarily small ones with less than 10 employees, a special product breakdown is used instead, which is more representative of small enterprises in the industry in question. These breakdowns are made at the most detailed level in the industry classification, i.e. corresponding to 322 manufacturing industries.

What turnover includes:

Code 1010 in the functional target total module, MTM, shows total turnover in each of the national accounts 130 branches.

In manufacturing industries, total turnover consists of:

- net turnover according to industrial accounts statistics
- + output of plant and machinery for own use
- + own account output of software
- + fringe benefits, output

where net turnover according to industrial accounts statistics will be exclusive of sales of goods for resale, which are picked out and transferred to wholesale.

Coding of turnover in the intermediate system:

In the intermediate system, the different parts of sales are coded as follows:

MLS- code	MLS- code text	
1007	Fringe benefits, output	
1012	Manufacture of plant and machinery for own use	
1015	Own output of software	
1017	Income from licences and royalties	(part of net sales)
1018	Other net sales, excluding 1017 and excluding 1059	(part of net sales)
1059	Other (services) sales, excluding 1017	(part of net sales).

Product definitions

When the national accounts product balances are compiled, total sales are divided over detailed products, which in the case of goods are defined on the basis of HS (Harmonised System) groups and for services are based on the CPA (Central Production Classification by Activity).

Products are allocated codes consisting of an initial letter followed by 6 digits. The initial letter characterises the product as follows:

E	Output for own consumption
F	Fringe benefits
H	“Hidden” output (black economy)
K	Plant and machinery (capital goods), plant for own use
L	Processing to order
M	Repairs and installation work in manufacturing
N	Services, in non-profit organisations
Q	Government non-market services for consumption
S	Public sales income
T	Services, market
U	Non-HS goods
V	HS goods.

Breakdown of output by product:

Those parts of output which are coded in the intermediate system as 1007, 1012 or 1015 are allocated directly to F and K products.

Licensing income and other (services) sales, which in the intermediate system are coded 1017 or 1059, are then calculated in special subsystems. These shares are allocated to two specific T products.

Remaining net sales (MLS code 1018) are divided up by product with the help of the industrial commodity statistics and a DK-NACE industry-specific key for minor manufacturing activity. The breakdown and the basis for it can be seen in the following tables, 3.27 and 3.28. For much the largest share of sales in this manufacturing industry, the product breakdown is directly observed, and for this reason there is very little uncertainty about the product composition. This is characteristic of virtually all national accounts industries within manufacturing.

Table 3.27: Extract from the 2003 intermediate system for NACE 320000

MLS code text	MLS code	National accounts industry	Basic price
Fringe benefits, output	1007	320000	15 185
Manufacture of plant and machinery for own use	1012	320000	4 428
Own output of software	1015	320000	63 875
Income from licences and royalties	1017	320000	28 073
Other and unspecified net sales (excl. "other sales" and excl. licences and royalties)	1018	320000	11 650 581
"Other sales", excluding licences and royalties	1059	320000	492 903
Total turnover	1010	320000	12 255 045
Inventories of finished goods	2065	320000	-238 144
Output value		320000	12 016 901

Table 3.28: Breakdown of turnover in NACE 32 by product

National accounts industry	DK-NACE industry	Turnover of own products in the MLS (own products from sales input into MLS excluding other sales P.63 from VS	Industrial Commodity Statistics (VS) (Total Excluding goods for resale P.43 and excluding other sales P.63)	Differences MLS-VS	Corrections due to MLS<VS	For the Breakdown with the VS for year t VM2003DB.txt	For the breakdown with "craft industries" year t-1 HÅ_NGL.03
320000	321010	1.187.777	1.077.589	110.188	0	1.077.589	110.188
320000	321090	748.354	352.366	395.988	-290 446	352.366	105.542
320000	322010	4.383.441	4.461.335	-77.894	77.894	4.461.335	0
320000	322020	607.410	590.476	16.934	0	590.476	16.934
320000	323010	2.744.208	2.956.760	-212.552	212.552	2.956.760	0
320000	323020	1.147.581	912.040	235.541	0	912.040	235.541
320000	323030	831.810	805.472	26.338	0	805.472	26.338
Total		11 650 581	11 156 038	494 543	0	11 156 038	494 543

Breakdown of intermediate consumption by product

For that part of intermediate consumption of manufacturing which consists of *goods*, including energy and packaging, there are particularly comprehensive and detailed costs structure statistics. Energy consumption is obtained from a special annual survey.

Information on the consumption of goods other than energy is obtained from periodic - as from 2000 annual - costs structure surveys. These have traditionally been referred to as "raw materials censuses", a term which today, however, may be considered misleading, since the inputs of goods cover raw materials as well as semi-manufactured products, intermediary products and packing costs. From 2000 the annual surveys also includes information on purchase of services in the

manufacturing industries¹⁰. These surveys of the structure of the consumption during the production process cover manufacturing only and, as a general rule, all manufacturing kind-of-activity units belonging to firms with 50 employees or more. Enterprises with more than 20 but under 50 fulltime-employees can be added to the population in industry groups with only a few firms with at least 50 employees. The cut-off sample covers app. 73 percent of total net turnover of all manufacturing Enterprises. The statistics is not enumerated to cover all manufacturing enterprises.

The commodity classification in the costs structure surveys is based on the CN classification and has six digits. The first four digits in the commodity coding system are identical in the external trade and the commodity statistics and in the raw materials statistics. Most important is, however, that the classification used in the raw material statistics corresponds to the product classification used in the supply and use matrices in the national accounts.

Before 2000 the surveys were collected with five or six years' intervals. A considerable extra effort was made to incorporate the data into the supply and use matrices for these years. When data from the surveys from 1991 and 1997 were entered into the uses side of the national accounts supply and use matrices, it was done in a separate phase that preceded the ordinary balancing of the system¹¹.

Since 2000 annual surveys have been available. As the survey was renewed into its present form in 2000, the data from this year had a higher than normal uncertainty, and it was decided that data from this survey should not be allowed more or less automatically to replace the input structures based on the balanced supply and use matrices from the previous year. Instead a technique was developed where data from the raw material survey were added to the file used by the people who were working on the manual balancing of the system. The person who was balancing a specific product would always work on spreadsheet data, in which intermediate consumption by industry would be shown together with the input values that had actually been reported in the raw materials survey. It was the responsibility of the "balancer" as far as possible to incorporate the information from the survey in the balanced supply and use matrices. As a result the survey data could be incorporated where they seemed plausible without the loss of information based on experience from earlier years. From 2001 the quality of the survey data has improved, but the system used for entering the information into the initial version of the supply and use matrix -file has essentially been the same as in 2000, as it has proved to be an efficient way to incorporate the annual surveys without the need of an extra, labour intensive, first round of balancing every year. Hence the input structure in the national accounts and the input-output tables for 2003 is based on the cost structure survey for 2003 and information from the structure in the balanced supply and use matrices from 2002 inflated to 2003-prices.

Recently it has been decided to introduce surveys of cost structures for industries outside manufacturing. Data will be collected for input in the construction industries, financial industries

¹⁰ The costs structure in the intermediate consumption of *services* was before 2000 covered by periodic surveys, the latest of which refers to 1992. This survey covered manufacturing firms with at least 200 employees and coverage is therefore much less good than in the costs structure surveys for the consumption of goods. The results were grossed up to cover all manufacturing enterprises and were incorporated into the supply and use tables following the same guidelines as the costs surveys relating to the consumption of goods.

¹¹ The figures were first of all grossed up to cover all units in manufacturing. Then a systematic comparison with the values estimated from the technical coefficients in the supply and use tables from the previous year was made. A probability check was carried out: the technical coefficients from the current survey were compared with those from previous surveys. Finally, the plausibility of the information was assessed on the basis of the total supply and use of the products in question in the economy and changes in the industries' output structure since the last "raw materials survey". The grossed up "raw materials survey" value for the intermediate consumption of a given good in a given manufacturing industry was incorporated directly into the supply and use unless in contradiction to other information. Otherwise, the technical coefficients were fixed on the basis of an overall assessment of the information referred to in the paragraph above.

and marketing industries. For general government a rolling five-year survey has already started by collecting data for primary and secondary schools. During the five year period the whole general government is expected to be covered. Information on input structures in service industries has for some time been relatively meagre compared to the importance of these industries, and it can be foreseen that in some industries the new information may lead to significant changes in the representation of the input structure. The appropriate method for incorporation of completely new input structures will probably be to have extra first round of balancing like the method used for incorporation of the survey data from 1991 and 1997.

For the costs structure surveys, it is vital to ensure that respondents comply with accounting stringency and discipline. If the questionnaire does not relate to well-defined items in the enterprises' own accounts and in the accounting statistics questionnaire, there is a serious risk of low-quality replies owing to failure to observe the fundamental constraints on totals. This in turn is crucial for the supply and use tables and the symmetrical input-output tables in the Danish national accounts, and one of the factors contributing to their solid statistical foundation.

3.11 Electricity, gas and water supply (E)

Introduction

NACE Section E is defined by function and includes four of the national accounts' 130 industries, namely:

401000	Production and distribution of electricity
402000	Manufacture and distribution of gas
403000	Steam and hot water supply
410000	Collection and distribution of water.

It covers seven industries at the most detailed DK-NACE level. In 2003, NACE E accounted for 2.1% of the value added of the Danish economy – cf. Table 3.29.

Table 3.29 NACE Section E's contribution to the gross value added of the economy

Industry	Output	Intermediate consumption	Value added at basic prices
401000 Production and distribution of electricity	20 203	7 634	12 569
402000 Manufacture and distribution of gas	9 675	7 337	2 338
403000 Steam and hot water supply	13 577	4 575	9 002
410000 Collection and distribution of water	3 184	1 921	1 263
Total NACE E	46 639	21 468	25 172
Percentage of the economy	2.0	1.9	2.1

Statistical sources

The statistical source underlying the estimate of value added in all four industries is accounting statistics for industries where publicly controlled units predominate, which for these industries are based partly on questionnaires and partly on local government accounts. The accounts from public units which are included in local government accounts are collected from these local government accounts statistics. The calculations for electricity and district heating works are based on

accounting information collected and published by *Dansk Energi* and *Danske Fjernvarmeværkers Forening*.

Table 3.30 Statistical sources underlying the calculation of value added for NACE E

National accounts industry	Source
401000 Production and distribution of electricity	Accounting statistics for industries where public corporations predominate
402000 Manufacture and distribution of gas	Accounting statistics for industries where public corporations predominate
403000 Steam and hot water supply	Accounting statistics for industries where public corporations predominate
410000 Collection and distribution of water	Accounting statistics for industries where public corporations predominate

Method of calculation

All four industries are defined by activity. All output of electricity, gas, district heating and water is assigned to the respective industries. This is important, particularly for the combined production of electricity and district heating. The output of district heating and the intermediate consumption that goes with it are transferred from the electricity supply industry to the district heating industry. This is feasible in practice because in 2003 electricity prices were subject to public control, which obliged the electricity producers to break down costs for the combined production of electricity and district heating into two parts.

The output value in the national accounts is the output for supply outside the industry, i.e. it excludes internal deliveries. The figures are therefore recorded net, i.e. internal supplies of energy from one unit to another in the industry are netted out. In the case of electricity and district heating, there are very large deliveries between production companies and distribution companies. The national accounts' output values for electricity and district heating are therefore much below the sales values which occur in other statistics. The main argument for net treatment of supply activity is that the supply and use tables are much more useful as a basis for the compilation of provisional national accounts when output and intermediate consumption are not inflated by large internal deliveries, which may fluctuate markedly.

For the production and distribution of electricity, accounting statistics from *Dansk Energi* and municipal accounts cover all electricity utilities apart from some production units. These units are calculated from accounting statements from the corporations. The accounting statistics and municipal accounts do not cover the output of electricity other than from actual power stations, such as that produced by private windmills and small decentralised heat and power plants. This output (other than electricity for the producer's own use during production) is included on the basis of information on quantities of electricity produced and an average kilowatt-hour price. Some of the electricity produced by private windmills, for example, is used for the owners' own consumption and some is sold to power stations which are obliged to take the power and distribute it via the general grid. The production of electricity using renewable energy sources such as wind is subsidised. For the estimate of output value, this product subsidy is added to the sales income reported. In 2003, the subsidy was DKK 233 million.

For the *manufacture and distribution of gas*, accounting statistics are based on accounts from all units in the industry, which is dominated by the distribution of natural gas. The industry includes the cleaning and processing of the natural gas which comes to the mainland from the North Sea gas fields. In the product balance system, there are three types of natural gas: natural gas I is the raw gas from the North Sea which is an input for the supply of gas. Natural gas II is that share of output which goes to “general” natural gas customers, i.e. all uses other than as an input in electricity power stations or district heating stations or as an export. Natural gas III is that share of output which goes to these last-named uses.

In *the supply of district heating*, the accounting statistics cover all units’ accounts either via questionnaires or via local government accounts. No grossing up is therefore needed. In addition to the accounting information, annual information from *Danske Fjernvarmeværkers Forening* on total purchases of heat in district heating plants (internal deliveries) is used, along with information from energy statistics on the total expenditure on fuel for all production of district heating in the country. Thus the netting out discussed above is possible in this industry, and the link with the physical energy balances is retained.

For *the collection and distribution of water*, the accounting figures collected for accounting statistics for industries predominated by public corporation do not cover all units and are therefore grossed up to the total population of producer units. In 2003, the raising factor was 1.61. The figures are grossed up on the basis of VAT sales. The great majority of accounting figures in the accounting statistics come from local government accounts.

Breakdown of output by product

All output of electricity is included in a single product balance. Economic theory, however, considers the various supplies of electricity to be very different products, and this is reflected in large differences in electricity prices per kilowatt-hour at basic price level, i.e. pre-tax, from one use to another. Large manufacturing users, for example, pay a much lower price than private consumers. The fact that there is only one product balance for electricity does not cause any problems for national accounts at current prices or for supply and use tables, since energy statistics can be used to estimate each individual use of electricity separately. For the estimate of volume changes, however, it is important to deal correctly with changes in the composition of the uses of electricity. For the national accounts constant price calculations, the product balance for electricity, like that of all other energy products, is deflated from the uses side, taking into account the different economic values of the individual deliveries of electricity and individual deliveries of other energy products.

The output of gasworks is, as already mentioned, divided into three products, namely gasworks gas, natural gas II and natural gas III.

The output from district heating works and the collection and distribution of water are shown in separate product balances.

In addition to the primary products referred to above, nace E produces software for own use and fringe benefits for employees.

Breakdown of intermediate consumption by product

By far the largest input in the supply industries is, of course, energy, and this part of intermediate consumption is established directly. Another large input is repair and maintenance, information on which is available from accounts statistics. There are no costs structure surveys which provide information on the distribution by product of the remaining, minor share of intermediate consumption consisting, for example, of services which come under business services. In the supply and use tables, this residual input is divided over product balances in the light of the known cost structure in related manufacturing industries, together with common sense considerations.

3.12 Construction (F)

Introduction

NACE Section F is defined by function and comprises four of the national accounts 130 industries, namely:

450001	Construction of new buildings
450002	Repair and maintenance of buildings
450003	Civil engineering
450004	Construction materials.

This section accounted for 5.3% of value added of the Danish economy in 2003 – cf. Table 3.31.

Table 3.31 NACE Section F's contribution to the gross value added of the economy

Industry	Output	Intermediate consumption	Value added at basic prices
450001 Construction of new buildings	49 689	28 472	21 218
450002 Repair and maintenance of buildings	51 530	22 259	29 272
450003 Civil engineering	44 929	31 669	13 260
450004 Construction materials	20 982	20 982	0
Total NACE F	167 130	103 381	63750
Percentage of the economy	7.1	9.0	5.3

The industry covers all construction and civil engineering activity in the Danish economy. The construction activity of Danish construction firms abroad is counted as output by a foreign institutional unit (notional resident unit) owned by the Danish firm, and does not give rise to any value added in Denmark but solely to transfers of wages and salaries and property income to and from the rest of the world. The reverse applies to the activity of foreign construction firms in Denmark.

NACE F covers 20 industries at the most detailed DK-NACE level. There is, however, no connection between the industries in the DK-NACE and the national accounts four construction industries. Whilst the breakdown into the 20 industries in the area of construction and civil engineering in the DK-NACE is based on *specialisation or trade*, e.g. bricklaying or carpentry, the national accounts breakdown is *functional*, i.e. based on the final product.

As for all other industries in the economy, the national accounts calculations of value added in construction are based on accounting data for the individual, detailed DK-NACE industries and subsequent aggregation. In the case of construction, however, this aggregation is not to the four sub-industries for construction activity in the national accounts' 130 grouping, but to the single division 45000, construction. Output, intermediate consumption and thus value added for all construction and civil engineering activity in the economy are then distributed over the four function-defined sub-branches: construction of new buildings, repair and maintenance of buildings, civil engineering and construction materials.

The national accounts for construction and civil engineering are the exception in running counter to Danmarks Statistik's industry grouping, primarily because of the supply and use tables and hence the balancing of the product balance system. There is, of course, a much closer, technology-driven connection between the output of various types of construction and civil engineering and certain kinds of construction materials than there is between the output value of the various specialisations and the input of construction materials. Building and civil engineering contractors, who are the largest single specialisation, may, for example, carry out new building work, repair and maintenance and civil engineering work, and the shares of these three activities may vary considerably over time. It is clear that, for example, the input of cement per krone of output is very different in the three activities mentioned. By using a functional breakdown of construction and civil engineering activity into sub-branches instead of a breakdown by trade or specialisation, the national accounts make effective use of information on the technical connection between construction activity and construction materials in the balancing of supplies and uses of goods and services.

Industry 450004 is an "artificial" industry, created for reasons of calculation, through which construction materials for own account construction activity are channelled. For example, instead of being allocated directly to the two uses - intermediate consumption in the "dwellings" industry, or capital formation in construction of dwellings - purchases by owner-occupiers and tenants of construction materials for ordinary repairs and maintenance (excluding the part that is considered household final consumption¹²) or major repairs (capital formation) count in the product balance system as inputs to an artificial industry, "construction materials", the output of which is by definition equal to the value of the industry's intermediate consumption at purchasers' prices¹³. This output is then distributed over the two categories of use referred to above.

Statistical sources

As already mentioned the industry is defined by function and covers all construction and civil engineering activity in the economy. Materials used for own-account construction activity in producer units classified in industries other than construction is transferred to the construction industry with the possible exception of some small repairs, for which the expenses cannot be distinguished from expenses on other intermediate consumption. Hence if some own-account production of ordinary repairs to buildings and structures in other industries are not transferred to branch 45000, construction, it is due to the lack of information on the value. Obviously, the lack of any imputation for that share of the value of ordinary repair and maintenance activity which is in excess of the expenditure on materials does not affect GNI, since the same value, if there had been

¹² Repair and maintenance of the type that in rented dwellings would typically be carried out by the tenants is treated as household final consumption in COFOG 4300, vb. ESA95 3.76.c.(1).

¹³ There is no non-deductible VAT on inputs in the artificial industry. Non-deductible VAT is shown in the uses side of the supply and use matrices where output from the artificial industry is distributed by user. Hence, as in all other industries, the production value does not include VAT.

one, would simply have been allocated to output value and intermediate consumption for the economy as a whole. It would simply have been a question of a different distribution of value added by industry. As always when branches are defined by function, the components transferred are output, intermediate consumption, compensation of employees, capital formation and employment. A practical consequence of the introduction of a virtual industry for building materials used for own account construction is, that the inputs in this industry merge a large number of products used for input into a few output-products that can be distributed by industry based on information on the use of repair and maintenance. Alternatively each of these building materials would have had to be distributed by industry, an exercise that would have to be based merely on assumptions as statistical evidence is unavailable at this level of detail. For instance, agricultural consumption of paint and wood preservative for the maintenance of buildings on own account is treated in the national accounts as an input into a minor, secondary auxiliary activity in agriculture, which in practice cannot be separated out with any degree of statistical certainty. The paint is included as an input in the artificial materials branch 450004, and agriculture receives an input of building repairs that includes the expenditure on the paint. Own-account ordinary repairs and maintenance are of minor importance for all industries other than dwellings, where the values concerned are substantial and the same model is used as has just been described using agriculture as an example.

Substantial secondary construction output for capital formation occurs in a number of industries, particularly in the public utilities industries, transport and communications. There is in these cases an output of construction of buildings and civil engineering on own account, which is capitalised in the companies' accounts. The value of the materials used and expenditure on wages and salaries are reported in the annual reports of these companies. Imputations are made to cover the value of gross operation surplus to ensure that the value of GFCF corresponds to the basic value of similar construction purchased in the market. These imputations are shown separately in the supply and use matrices.

The statistical source for the estimate of value added in genuine construction and civil engineering enterprises is the industrial accounts statistics – cf. Section 3.1.4. These statistics are grossed up from the outset to the total population when incorporated into the national accounts. As already mentioned, the figures are calculated separately for each of the 20 construction industries in the detailed DK-NACE.

Table 3.32 Statistical sources underlying the calculation of value added for NACE F

National accounts industry	Sources
450001 Construction of new buildings	Industrial accounts statistics + estimate for own account GFCF transferred to 450001
450002 Repair and maintenance of buildings	Industrial accounts statistics + estimates for hidden economy and own account GFCF
450003 Civil engineering	Industrial accounts statistics + estimate for own account GFCF transferred to 450003
410000 Construction materials	By definition no value added

For the national accounts estimate of construction, the secondary construction activity which takes place in other industries must, as described above, be estimated and transferred to the construction branch. Information on such activity is found in the accounts statistics, more particularly in statistics for industries where publicly controlled units predominate - the public utilities industries (electricity

etc.), railways, harbours, airports etc. - and where there is substantial output of civil engineering work for own account.

Conversely, the activity of Danish construction firms in the economic area of the rest of the world has to be separated out and subtracted. The main source here is VAT statistics, which provide information on the tax-free exports of construction and civil engineering firms. This export income is divided into the following components: 1) exports of construction materials to the firms' building sites in other countries; 2) payment for construction materials supplied directly from the ROW to construction sites in the ROW; 3) the compensation of employees on construction sites in the ROW and 4) gross operating surplus and mixed income (property income from the ROW). This breakdown, which is used for the calculations of construction activity, is also used in the ROW account and in balance of payments statistics, so that consistency is guaranteed. The breakdown is based on an estimate which in turn is based on the structure of costs in new building work.

The construction activity of foreign construction firms in the Danish economic area is covered via grossing up, with the relevant wages and salaries and employment recorded in Denmark and thus included in the employment to which the accounting statistics are grossed up.

Construction - more particularly, building repair work - is one of the areas in the economy where there is most "black" economic activity. In the Danish national accounts, there is a substantial allowance added in for building repairs in the black economy. The sources and methods are described in Section 7.1. The whole of this black-economy activity is treated in the Danish national accounts as "work in the black economy" of the type "VAT evasion with the collusion of the buyer". The allowance for work in the black economy does not give rise to any allowance for "VAT fraud in connection with underreporting", as in the catering industry, for example. The rationale is that, in the case of construction, the buyers and sellers negotiate a price for each individual project and that it appears to have become the practice for purchasers to be offered work in either the legitimate (white) or the black economy, i.e. work either with or without an invoice. In every case, the allowance for work in the black economy is determined on the basis of the prices which the purchasers pay, so that the effect on GNI is the same whether the above assumption applies or not.

Method of calculation

Even though the value added of construction is basically calculated from accounting statistics in exactly the same way as for other industries, there is a crucial difference as regards output and intermediate consumption. In other industries, output, intermediate consumption and value added are calculated from the same source, namely the processed accounting statistics. In construction, value added is first calculated from the processed accounting statistics, output is subsequently calculated from other sources and finally intermediate consumption is calculated as a residual.

The other sources for the estimate of output are firstly those underlying the estimate of capital formation in construction – cf. the description in Chapter 5.

In principle the sources for that share of output which is professional non-black repairs to buildings for the account of others have been based the quarterly employment censuses for the construction industry and estimated output values pr. employed person. In the employment censuses, employed workers and master craftsmen are divided up by activity on the census date, a distinction being made between new building, repair and maintenance and civil engineering. From these statistics, a list is compiled of firms engaged mainly in repair and maintenance work. When such a list has been

available, their VAT sales have been extracted from VAT statistics. Next, turnover per person in employment in these firms is calculated and multiplied by total employment in construction. While this system worked well in times with low activity in the construction of new buildings, it has its limitations in periods, where it is almost impossible to find enough enterprises that specialise in repair and maintenance. In the later years the initially estimated value pr. employee has mainly been based on extrapolation from the preceding year by means of a price index for repair of buildings. Based on information from the household budget surveys and the estimate for supply of professional repair and maintenance is split into three parts: Direct household final consumption (COFOG 4300), ordinary repair and maintenance and capital repairs and supplements are added for materials used in own-account construction, gross value added in the hidden economy and gross value added in own-account GFCF in dwellings cf. the description in Chapter 5.

All initial estimates for repair and maintenance are confronted in the subsystem for repair and maintenance, where supply- and use of each product is balanced, before it is entered into the initial supply and use matrix files. Repair and maintenance of civil engineering works is here estimated from the uses side based on information from accounts statistics. In practice repair and maintenance of buildings is also adjusted to values that are in accordance with the information on the uses side, for instance the value for repair and maintenance of dwellings that is the result of the calculation of input in the housing industry.

In this way, we obtain a figure for the total output of construction. Together with the estimated capital formation in buildings and structures, a figure is thus obtained for the actual output of construction and civil engineering. In addition, there is the artificial construction materials branch, which is included in output and intermediate consumption with the same value. An initial estimate prior to balancing for this is fixed on the basis of changes in the output of repairs and maintenance for the account of others – cf. above. The construction materials branch is included in the balancing process, and the values initially fixed will generally be amended as part of the balancing of supplies and uses in the product balance system.

The argument behind the calculation method described above is that, in the absence of exhaustive product statistics for construction, we have to estimate the output of the individual types of building, civil engineering and repair work from other sources. To ensure that value added is firmly anchored in accounting statistics, intermediate consumption has to be calculated as a residual.

When the output of construction and civil engineering products estimated from these other sources is compared with output according to accounting statistics corrected for subcontracting, it emerges that the former set of statistics has regularly higher figures than the latter. The most likely explanation is that the output of capital formation in structures is calculated from the expenditure side and will include machinery and equipment which is not in all cases purchased and installed by the building contractor but may often be purchased and installed by the client without the contractor's being involved. One example is machinery in a power station. This problem affects only the dividing line between capital formation in machinery on the one hand and construction and civil engineering on the other, and does not affect GNI. The method of calculation chosen for the Danish national accounts means that all (or virtually all) capital formation in a power station, for example, is classified as being in civil engineering, even though the customer has purchased buildings and machinery separately. The consequence in the product balance system is that the relevant quantity of machinery is posted as an input in civil engineering and is included in civil engineering output value.

In the Danish national accounts, all construction and civil engineering activity carried out in the rest of the world by Danish construction firms is considered to be an activity taking place in an ROW quasi-corporation (notional resident unit) owned by the Danish construction firm, and not as an export of Danish construction and civil engineering activity. The value added therefore arises in the rest of the world and not in the Danish economy. This treatment is in line with footnote 4 to paragraph 2.09 b) in the ESA 95. In Denmark's case, the activity in question is almost always one which gives rise to gross fixed capital formation in the rest of the world – as opposed to the ordinary repair and maintenance of buildings and structures. This is the criterion in the relevant paragraph of the ESA 95. In the accounts for construction and civil engineering firms with activity on foreign building sites, the activity in other countries will, however, be included. To bring the calculation of value added into line with the geographical delimitation described above, output and intermediate consumption corresponding to the activity in the rest of the world have to be extracted from these business accounts, as described above. The source for this is VAT statistics information on the tax-free export sales of construction and civil engineering firms.

The calculation also includes an allowance for self-built or partially self-built housing, i.e. the fairly common case in which the customer himself is responsible for some of the painting of a new house, for example. On the output side, the allowance is incorporated into the imputed value of the output of the black economy. The calculation provides for a self-built/partially self-built allowance to be added to intermediate consumption, over and above the figures in business accounts.

The calculation of output, intermediate consumption and value added for the construction industry is shown in tables 3.33, 3.34 and 3.35 below:

Table 3.33 Corrections to the accounts statistics output values, 2003

	AS = accounting statistics	DKK million
	Market output in AS (plus work in the black economy and imputed gross value added in market own-account GFCF)	157 176
+	Government non-market output	7 809
-	Subcontracts imputed	22 716
+	Construction and civil engineering activity in power stations	1 013
+	Own-account structures in telecommunications	784
+	Own-account structures in integrated public corporations	358
+	Own-account structures in the "operation of toll bridges"	0
-	Tax-free exports according to VAT statistics	2 912
+	Imports of contractors' services relating to investments in the North Sea	917
=	Output value according to corrected accounting statistics	142 428

Table 3.34 Corrections to accounts statistics intermediate consumption, 2003

	DKK million
Intermediate consumption in AS (market)	95 591
+ Intermediate consumption (government non-market)	5 539
- Subcontracts imputed	22 716
+ Construction and civil engineering activity in power stations	91
+ Own-account structures in telecommunications	523
+ Own-account structures in integrated public corporations	184
+ Own-account structures in "operation of toll bridges"	0
- Input corresponding to tax-free exports	1 789
+ Allowance for self-build	327
+ Imports of contractors' services relating to investments in the North Sea	917
= Intermediate consumption according to corrected accounting statistics	78 667

Table 3.35 Determining value added and the initial estimate for intermediate consumption, construction and civil engineering as a whole, 2003

	DKK million
Output value according to corrected AS	142 428
- Intermediate consumption according to corrected AS	78 667
= Value added according to corrected RS	63 762
Output according to product balances	167 130
<i>of which construction materials branch</i>	20 982
- Value added according to corrected AS	63 762
= Initial estimate for intermediate consumption	103 369
- Intermediate consumption after balancing	103 381
= Difference between initial estimate and balanced input total	-12

Construction and civil engineering is one of those industries where the initial estimate of intermediate consumption has traditionally been amended during the balancing process. One reason is that the industry includes many small enterprises, and thus the grossing up percentage is consequently greater than in manufacturing, for example. In addition, the correction for construction materials corresponding to construction and civil engineering activity in the economic area of the rest of the world is hedged with a certain amount of uncertainty. For these reasons, the input target total for construction and civil engineering is considered to be one of the initial estimates likely to be amended during the balancing process.

Breakdown of output by product

As previously mentioned, there are at present no (direct) product statistics for construction corresponding to the industrial commodity statistics, for example. However, accounting statistics include information on purchases of subcontracting, extremely important information in this industry, where the subcontracting of parts of projects is particularly common. In the absence of any direct product statistics, indirect statistics have been compiled for national accounts calculations,

based mainly on expenditure-side information on kinds of construction and civil engineering work other than repair and maintenance. Resources of repairs and maintenance are calculated using the method described in Section 3.12.3.

For construction of buildings, the output side makes a distinction between housing, private non-residential construction, public construction for commercial purposes (to market producers) and government non-market construction (to non-market producers). Civil engineering is broken down into private structures, public commercial structures and public non-commercial structures. Each of these components (apart from repairs and maintenance) is estimated from the expenditure side as described in Section 5.10. For the repair and maintenance of buildings, the initial estimate prior to balancing assumes 45% for ordinary repairs and maintenance (intermediate consumption) and 55% for major repairs (gross fixed capital formation). These percentages are based on information on kinds of expenditure on craftsmen and expenditure on materials connected with housing in the household budget survey.

In addition to the above genuine products from construction and civil engineering, the industry, in common with the other industries in the economy, produces fringe benefits and capital goods, including software for own use. Table 3.36 below shows the breakdown of output from construction and civil engineering in 2003. Construction resources come from both industries 450001 New buildings and 450002 Repair and maintenance of buildings. This latter addition is major repairs and improvements which in the national accounts are considered to be capital formation.

Table 3.36 Breakdown by product of output from construction, 2003

Sub-industry	Product	Text	Value (DKK mill)
450001	F711000	Fringe benefits, free car	82
450001	F713310		3
450001	K450000	Plant and machinery/structures for own use in the construction industry	360
450001	K454012	Imputed gross operating surplus, own account GFCF in public commercial buildings.	7
450001	K722000	Software produced on own-account	28
450001		Royalties (excl. software)	18
450001	U454010	Construction, dwellings	23 875
450001	U454011	Construction, private non-residential buildings	16 725
450001	U454012	Construction, public commercial buildings	2 484
450001	U454013	Construction, public non-commercial buildings	6 069
450001	U454015	Construction, buildings for military GFCF	37
450001 Total new building			49 689
450002	F711000	Fringe benefits, free car	124
450002	F713310		5
450002	H454001	Output in the black economy, building repairs	2 842
450002	H454010	Output in the black economy, construction of dwellings	671
450002	K454010	Imputed gross value added, own account GFCF in dwellings	1 563

450002	K722000	Software produced on own-account	27
450002	M454001	Building repairs (ordinary)	20 953
450002	U454010	Construction, dwellings	16 776
450002	U454011	Construction, private non-residential buildings	6 514
450002	U454013	Construction, public non-commercial buildings	1 776
450002	U454015	Construction, buildings for military GFCF	128
450002	U454018	Construction, military buildings, repair and non-GFCF	152
450002 Repair and maintenance of buildings, total			51 530
450003	F711000	Fringe benefits, free car	29
450003	F713310		1
450003	K450000	Plant and machinery/structures for own use in the construction industry	160
450003	K454022	Imputed gross operating surplus, own account GFCF in public commercial structures.	112
450003	K722000	Software produced on own-account	24
450003	M454005	Repairs to structures	11 649
450003	Q454005	Repairs to structures, government non-market	6 705
450003	S454005	Repairs to structures, public sales revenue	846
455003	S980990	Internal supplies between public bodies	258
450003	U454021	Private new structures	5 740
450003	U454022	Public new structures, commercial	15 192
450003	U454023	Public new structures, non-commercial	4 012
450003	U454025	Construction, structures for military GFCF	177
450003	U454028	Construction, military structures, repair and non-GFCF	24
450003 Civil engineering, total			44 929
450004	M454001	Building repairs	14 243
450004	U454010	Housing construction	6 739
450004 Construction materials, total			20 982
450000 Construction and civil engineering, total			167 130

Breakdown of intermediate consumption by product

There are no regular costs structure surveys for intermediate consumption in construction. The information which it has been possible to collect over the years from ad hoc surveys has gradually been incorporated into the input structure as expressed in the supply and use tables. The industry's consumption of energy is available annually from energy statistics.

For subcontracting and services, the input structure is based on information on certain kinds of costs such as subcontracting and rentals, which are found in accounting statistics. Subcontracting is netted out – cf. the description of the method of calculation in Section 3.12.3. Intermediate consumption which is counted under the accounting statistics item “other external expenditure” is

divided up by product on the basis of the structure of costs in certain manufacturing industries and common sense considerations about the connection between the number of employees and services such as telephones and cleaning. The construction industry incurs considerable costs for the transport of the building materials used for its output. In the national accounts, this input of services will partly be a “transport margin”, i.e. a margin lying between the basic price of the construction materials ex-producer and the purchase price including margins and taxes which the construction enterprise pays overall for the acquisition of the materials. In the Danish national accounts, transport margins are not shown explicitly, since this would overload the supply and use tables with a large number of empty cells. Instead, they are included in wholesale trade margins¹⁴.

In the balanced supply and use tables for 2003, there is approximately DKK 14 700 million wholesale trade margins (including formal transport) and DKK 3 200 million retail trade margins on intermediate consumption in the construction industry, when the materials branch is included. Of this input in the material branch accounts for DKK 6 400 million wholesale and DKK 3 000 million retail trade margins. These figures illustrate the importance of distribution services in the total intermediate consumption of the construction industry. The retail trade margins on inputs, of which most is trade margins on inputs in the materials branch, reflects the considerable production value in retail trade in building materials.

Even though there are at the moment no actual costs structure statistics for the composition of intermediate consumption in the construction industry, the input structure in the industry may be said to be established with a reasonable degree of certainty. The reason is the connection between the technical properties of the goods and their use, in this case as inputs in construction. Goods such as cement and prefabricated building components have few real uses other than as inputs in construction or as exports (or as changes in inventories). When supplies to the domestic market are fixed on the basis of industrial output statistics, external trade statistics and calculations of inventories, the remaining use is more or less bound to be as inputs in the construction industry. In this situation the detailed system of supply and use matrices will provide most of the information used to determine the input structure of the industry¹⁵.

¹⁴ Transport paid by the purchasers of goods which is not separately invoiced is allocated in the national accounts first of all to inputs in the wholesaling industry. The output value of wholesaling is increased by the same amount, so that the total wholesaling margins are increased by the transport expenditure on goods which is defrayed by the purchasers. In this way, transport is channelled through the wholesaling industry, without affecting that industry's value added. This way of posting transport margins in the Danish national accounts has traditionally been referred to as “formal transport”

¹⁵ A new comprehensive questionnaire based survey of the input of materials and services in the construction industry is starting up in 2006.

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

Introduction

NACE Section G is defined by function and covers nine of the national accounts' 130 industries, as shown in Table 3.37, which also shows that this section accounted for 12.2% of value added in the Danish economy in 2003:

Table 3.37 NACE Section G's contribution to the gross value added of the economy

Industry	Output	Intermediate consumption	Value added at basic prices
501009 Sale of motor vehicles, motorcycles, etc.	16 421	5 666	10 755
502000 Repair and maintenance of motor vehicles	16 776	11 462	5 314
505000 Service stations	1 457	493	964
510000 Wholesale and commission trade, except of motor vehicles	161 632	77 457	84 174
521090 Retail sale of food etc.	21 759	8 066	13 693
522990 Department stores	10 394	4 904	5 490
523000 Retail sale of pharmaceutical goods, cosmetic articles, etc.	3 371	786	2 586
524190 Retail sale of clothing, footwear, etc.	9 430	4 209	5 221
524490 Other retail sale, repair work	30 255	12 367	17 889
Total NACE G	271 496	125 410	146 087
Percentage of the economy	11.5	10.9	12.2

NACE G covers all trading activity in the Danish economic area. Secondary trading activity in producer units classified under other industries is separated out and transferred to the relevant trade industry, normally 510000, wholesale and commission trade except of motor vehicles. Secondary trading activity occurs particularly in manufacturing and transport. All motor vehicle repair activity is collected together under industry 502000.

This section covers 159 industries at the most detailed DK-NACE level. As for all other industries in the economy, the national accounts' calculations of value added in trade and repair are based on accounting data for the individual detailed DK-NACE industries and subsequently aggregated.

Statistical sources

NACE 50, sale and repair of motor vehicles, etc, NACE 51, wholesale trade and commission trade except of motor vehicles, and NACE 52, retail trade except of motor vehicles etc., are all covered by the industrial accounts statistics as shown in table 3.38:

Table 3.38 Statistical sources underlying the calculation of value added for NACE G

National accounts industry	Source
501009 Sale of motor vehicles, motorcycles, etc.	Industrial accounts statistics
502000 Repair and maintenance of motor vehicles	Industrial accounts statistics
505000 Service stations	Industrial accounts statistics
510000 Wholesale and commission trade, except of motor vehicles	Industrial accounts statistics
521090 Retail sale of food etc.	Industrial accounts statistics
522990 Department stores	Industrial accounts statistics
523000 Retail sale of pharmaceutical goods, cosmetic articles, etc.	Industrial accounts statistics
524190 Retail sale of clothing, footwear, etc.	Industrial accounts statistics
524490 Other retail sale, repair work	Industrial accounts statistics

Method of calculation

Since the whole of NACE G is covered by industrial accounts statistics, the method of calculation is the standard method for use of these statistics, as described in Section 3.1.4. The only particular point to be mentioned is that, in line with ESA 95, the output of trade services in wholesale and retail trade is calculated as the sum of the trade margins obtained, i.e. the selling price of goods resold minus their acquisition price. In practice, the consumption of goods for resale is calculated from purchases during the period in question plus changes in inventories of goods for resale between the start and the end of the period, with the national accounts price correction described in Section 3.3.

Breakdown of output by product

NACE 50 includes both trade in and repairs to motor vehicles etc, in both the national accounts industries and at the most detailed DK-NACE industry level. For example, a very large share of the total motor vehicle repair activity in the economy is carried out not in producer units classified under NACE class 50.20, maintenance and repair of motor vehicles, but in those classified under DK-NACE 50.10.20, retail sale of motor vehicles. The first stage in the breakdown of products is therefore to divide the output of NACE 50 into the three main components:

- 1) trade margins on vehicle-related products
- 2) trade margins on consumables sold at service stations
- 3) motor vehicle repairs.

The statistics “Distribution of sales in the motor vehicles branches”, covering latest the year 2000, break down sales in NACE 50 enterprises. Following this stage, the output of NACE 50 is divided up into trade margins on the one hand and motor vehicle repairs on the other.

Similarly, the output of NACE 52 has to be divided up into trade margins and repair services. This breakdown is, however, simple, since there is much less overlap between trade and repair activity than in NACE 50. In practice, producer units in the detailed DK-NACE industries within groups 52.1-52.6 are considered to be purely retail enterprises whose output (other than fringe benefits and capital goods for own account) consists solely of retail margins, whilst units classified in industries within group 52.7 are considered to be purely repair enterprises whose output is repair services.

The national accounts supply and use tables operate with two types of margin, namely wholesale and retail. The whole of the trade margin in NACE 51 is by definition a wholesale margin and,

similarly, the whole margin in NACE 52 is a retail margin. NACE 50 covers both wholesale and retail trading activity, and in the national accounts the total trade margin in NACE 50 is divided up into wholesale and retail on the basis of information in the product statistics for the motor vehicles branches, "Distribution of sales in the motor vehicles branches," and information on margin percentages at product level.

For the compilation of the supply and use tables, the wholesale and retail totals calculated are divided up over the 2000 or more national accounts goods balances. The breakdown is based on the previous year's adjusted wholesale and retail margins. The margin total obtained using the previous year's percentages is compared in the current year with the margin totals by individual product group for the detailed trading industries which distribute the product groups in question, and the margins are adjusted to the given totals. This comparison of two independently calculated sets of margins for the individual product groups is in itself a valuable check on the margins calculated from product statistics which for the trade industries in most cases are identical with the accounting statistics at the most detailed level of the DK-NACE industry classification.

Breakdown of intermediate consumption by product

There are no regular costs structure statistics for the trade industries other than energy statistics. The input structure in these industries is established in the national accounts on the basis of the summary cost specifications in accounting statistics - rentals and repair and maintenance, for example - in conjunction with ad hoc information from branch organisations and the competition authorities. The breakdown into the individual products is to some extent based on estimates which are in turn based on common sense considerations. It should be stressed, however, that a good deal of the cost structure is determined very reliably from supply information in conjunction with information on manufacturing. Examples would be packaging and advertising agency services. Once the supply to the domestic market of the relevant products has been determined along with their use as inputs in manufacturing their use in the trading industries can be worked out via a residual calculation.

3.14 Hotels and restaurants (H)

Introduction

NACE Section H is defined by function and comprises two of the national accounts' 130 industries. These two industries are illustrated in Table 3.39, which also shows that NACE H accounted for 1.5% of the value added of the Danish economy in 2003:

Table 3.39 NACE Section H's contribution to the gross value added of the economy

Industry	Output	Intermediate consumption	Value added at basic prices
551009 Hotels etc.	9 650	5 211	4 439
553009 Restaurants etc.	29 122	15 913	13 208
Total NACE H	38 772	21 125	17 647
Percentage of the economy	1.6	1.8	1.5

NACE H covers all hotel and restaurant activity in the Danish economic area with the exception of restaurant activities connected with passenger vessels and aircraft which are not outsourced to another enterprise. This last activity is an inseparable part of transport activity. The running of

canteens in other industries is separated out and transferred to 553009 restaurants etc., as are employers' subsidies to canteens, an important fringe benefit for employees which is considered to have been produced in the restaurant industry and included in that industry's value added. In 2003, the amount was DKK 4 245 million.

NACE H covers 15 industries at the most detailed DK-NACE level. As for all other industries in the economy, the national accounts calculations of value added in the hotel and restaurant industries are based on accounting data for the individual detailed DK-NACE industries and subsequent aggregation.

Statistical sources

Coverage is provided by industrial accounts statistics, which are the statistical source for all primary activity. Secondary canteen activity is compiled as the sum of employees own payments and employers' subsidy. The source for employees' own payments is the household budget survey. Employers' subsidy is equal to the compiled fringe benefits related to canteens calculated from the labour costs surveys.

Table 3.40 Statistical sources underlying the calculation of value added for NACE H

National accounts industry	Source
551009 Hotels etc.	Industrial accounts statistics
553009 Restaurants etc.	Industrial accounts statistics

Method of calculation

Since the whole of this section is covered by the industrial accounts statistics, the method of calculation is the standard method for the calculation of value added from the industrial accounts statistics via the intermediate system and the target total module, as described in Section 3.1.4 and 3.3.

Breakdown of output by product

In addition to the fringe benefit "free cars" and "own-produced software", output is divided into 16 products. The basis for the product distribution is the breakdown of the sales of the two national accounts industries into the detailed DK-NACE industries. The explicit allowances for underreporting and gratuities plus the VAT fraud associated with them are shown in separate product balances, so that there is always a complete overview of these explicit allowances, in both national accounts calculation systems and directly in the supply and use tables.

In connection with the breakdown by product, a minor share of sales in units classified as hotels is transferred to restaurant services to take account of the fact that hotels may run their own restaurants.

Breakdown of intermediate consumption by product

There are no regular costs structure statistics for the hotels and restaurants industries other than energy statistics. The input structure in these industries is established in the national accounts on the basis of the summary cost specifications in accounting statistics - rentals and repair and maintenance, for example - in conjunction with ad hoc information from branch organisations and the competition authorities. The breakdown into the individual products is to some extent based on

estimates which are in turn based on common sense considerations concerning inputs of cleaning and laundry services, for example. The input of food and beverages, which is, of course, by far the largest input, is calculated as a residual.

3.15 Transport, storage and communication (I)

Introduction

NACE I is defined on the basis of a grouping of producer units and covers nine of the national accounts' 130 industries. These are shown in Table 3.41, which also shows that NACE I accounted for 8.4% of the value added of the Danish economy in 2003.

Table 3.41 NACE Section I's contribution to gross value added of the economy

Industry	Output	Intermediate consumption	Value added at basic prices
601000 Transport via railways	9 381	3 738	5 643
602100 Other scheduled passenger land transport	10 061	5 789	4 271
602223 Taxi operation and coach services	6 236	2 215	4 022
602409 Freight transport by road and via pipelines	37 701	21 051	16 651
610000 Water transport	93 231	76 755	16 476
620000 Air transport	16 376	11 262	5 114
631130 Cargo handling etc.	21 522	10 120	11 402
634000 Activities of other transport agencies	14 400	6 376	8 023
640000 Post and telecommunications	58 942	30 249	28 693
Total NACE I	267 849	167 554	100 295
Percentage of the economy	11.4	14.5	8.4

This section covers 36 industries at the most detailed DK-NACE level. As for all other industries in the economy, the national accounts' calculations of value added of transport, post and telecommunications are based on accounting data for the individual detailed DK-NACE industries and subsequent aggregation.

Statistical sources

The most important sources are industrial accounts statistics and accounts statistics for industries predominated by public corporations. In addition, there are special industry-specific accounts statistics for the most important industry, water transport - cf. Section 11.1. Use is also made of information from transport statistics on the value of package tours and from balance of payments statistics on the expenditure of Danish vessels in the rest of the world.

With two of the national accounts industries, one set of accounting statistics is used for some of the detailed DK-NACE industries covered and another set for other industries. The following table of statistical sources refers in such cases to the national accounts' most detailed industry grouping and shows the source used for each of the very detailed DK-NACE industries.

Table 3.42 Statistical sources underlying the calculation of value added for NACE I

National accounts industries/DK-NACE industries	Source
601000 Transport via railways	Accounts statistics for industries predominated by public corporations
602100 Other scheduled passenger land transport	Accounts statistics for industries predominated by public corporations
602223 Taxi operation and coach services	Industrial accounts statistics
602409 Freight transport by road and via pipelines	Industrial accounts statistics
610000 Water transport	Industrial accounts statistics
620000 Air transport	Industrial accounts statistics
631130 Cargo handling, harbours etc.	
631100 Cargo handling	Industrial accounts statistics
631132 Government non-market output	Statistics for general government
631200 Storage and warehousing	Industrial accounts statistics
632110 Operation of stations and terminal facilities for the handling of goods	Industrial accounts statistics
632120 Operation of parking lots or garages	Industrial accounts statistics
632130 Operation of tollbar stations for roads, bridges and tunnels	Accounts statistics for industries predominated by public corporations
632210 Harbours (traffic and fishing harbours)	Accounts statistics for industries predominated by public corporations
632230 Lighthouse activities and pilotage activities	Accounts statistics for industries predominated by public corporations
632240 Towing and lifeboat service	Industrial accounts statistics
632300 Airports, etc.	Accounts statistics for industries predominated by public corporations
633010 Tourist agency activities	Industrial accounts statistics
633020 Travel agencies, tour operators	Industrial accounts statistics
633030 Travel agencies, furnishing tickets	Industrial accounts statistics
633040 Tourist guide activities	Industrial accounts statistics
634000 Activities of other transport agencies	Industrial accounts statistics
640000 Post and telecommunications	Industrial accounts statistics

Method of calculation

The whole of this section is covered by the industrial accounts statistics and accounts statistics for industries predominated by public corporations. The method of calculation here is the same as the standard method for the calculation of value added based on the industrial accounts statistics via the intermediate system and the target total module as described in 3.1.4 above.

Breakdown of output by product

In addition to the products for "fringe benefits" and "own-produced software", output is divided into 39 products. The basis for the product distribution is the breakdown of the sales of the nine national accounts industries into the detailed DK-NACE industries. The explicit allowances for underreporting associated with them are shown in separate product balances, so that there is always a complete overview of these explicit allowances, in both national accounts calculation systems and directly in the supply and use tables.

Breakdown of intermediate consumption by product

There are no regular cost structure statistics for the transport industries, but a very large share of input is covered by the information found in annual energy statistics on the industries' consumption of energy. By far the largest input in water transport is the expenditure of Danish vessels in ports in

the rest of the world, expenditure on time charters and on energy. The primary statistics give annual information on these major expenditure items.

The breakdown by product of the remaining share of intermediate consumption, on which there is no annual information in primary statistics, is based to some extent on estimates, the starting point being the technical coefficients in the supply and use tables from previous years.

3.16 Financial intermediation (J)

Introduction

NACE J is defined on the basis of a grouping of producer units and covers five of the national accounts' 130 industries, as shown in Table 3.43, which also shows that this section accounted for 5.4 % of the value added of the Danish economy in 2003.

Table 3.43 NACE J's contribution to the gross value added of the economy

Industry	Output	Intermediate consumption	Value added at basic prices
651000 Monetary intermediation	49 467	13 708	35 759
652000 Other financial intermediation	21 715	11 686	10 029
660102 Life insurance and pension funding	7 644	4 657	2 987
660300 Non-life insurance	18 950	7 748	11 202
670000 Activities auxiliary to financial intermediation	8 782	4 307	4 475
Total NACE J	106 558	42 105	64 452
Percentage of the economy	4.5	3.5	5.4

The division covers 27 industries at the most detailed DK-NACE level. Where NACE 65 and 66 are concerned, the national accounts' calculation system does not exactly match the detailed industries in the DK-NACE, in that the calculations are based on the grouping in the available sources, primarily the annual reports of *Finanstilsynet* [the Danish Financial Supervisory Authority]. One example where the industry grouping in the calculation systems differs from DK-NACE is pension funds, where the national accounts' sources make a distinction between non-company-specific pension funds and company pension funds, whilst the DK-NACE does not have this distinction.

The calculations of value added for financial intermediation are made in terms of the individual detailed industries and subsequently aggregated to national accounts' industries.

Statistical sources

The great majority of financial institutions in NACE 65 and 66 are subject to extremely close public supervision out of concern for the security of the money belonging to depositors and policyholders. The Danish supervisory authority is *Finanstilsynet*, which comes under the Ministry of Economic and Business Affairs. *Finanstilsynet's* reports (based on the mandatory submission of standardised accounts) are normally the preferred source. An important exception is Denmark's mortgage credit institutes in DK-NACE 652230. In this case, the information in *Finanstilsynet's* report is much less detailed than it is for banks and insurance corporations etc. Since there were only 8 mortgage credit corporations in 2003, Danmarks Statistik decided to base the calculations directly on the 8 annual accounts, which include much more detailed information.

There are minor parts of NACE 65 which are not subject to *Finanstilsynet* control. One such is financial leasing, where the source is statistics for large financial corporations. For DK-NACE 65.22.60 - consumer credit institutions – the information is based on primary statistics for consumer credit institutions. Finally, for NACE 65.23, Other financial intermediation n.e.c., the accounts of *Arbejdsmarkedets Feriefond, Den Særlige Pensionsopsparring, Lønmodtagernes Dyrtdsfond* and *Arbejdernes Kooperative Finansieringsfond* are used.

NACE 67, Activities auxiliary to financial intermediation, is covered by company accounts grossed up on the basis of employment to cover the total population.

The following table gives an overview of the sources used for the national accounts' calculations for NACE J.

Table 3.44 Statistical sources underlying the calculation of value added for NACE J

National accounts industry/DK-NACE industry	Source
651000 Monetary intermediation	
651100 <i>Danmarks Nationalbank</i>	<i>Nationalbank</i> annual report and accounts
651200 Other monetary intermediation*	Report from <i>Finanstilsynet</i>
652000 Other financial intermediation	
652100 Financial leasing	Statistics for large financial corporations
652230 Mortgage credit institutes	Annual accounts for all corporations
652240 Other credit institutes	Accounts
652260 Financing companies	Statistics for large financial corporations
652295 Other lending activities	Statistics for large financial corporations and accounts grossed up on the basis of total balance
652310 Unit trusts**	Report from <i>Finanstilsynet</i>
652320 Investment companies***	Accounts grossed up on the basis of total balance
652330 Security dealing activities	Accounts grossed up on the basis of total balance
652340 Financial holding companies	Accounts grossed up on the basis of total balance
652395 Other financial intermediation n.e.c.	Accounts
660102 Life insurance and pension funding	Report from <i>Finanstilsynet</i>
660300 Non-life insurance	Report from <i>Finanstilsynet</i>
670000 Activities auxiliary to financial intermediation	Accounts grossed up on the basis of employment

Method of calculation

The output of NACE 65 is calculated as the sum of financial intermediation services paid for directly (charges and fees, commissions, margins on the trading of securities and foreign exchange) and financial intermediation services paid for indirectly (FISIM) other than in a few cases where output is established from the costs point of view as the sum of production costs. These cases are *Danmarks Nationalbank, unit trust, Venture companies and financial holding companies*.

* Literally: banks, savings banks and savings and loan associations.

** "Investeringsforeninger" translates "mutual funds" in the ESA 95.

*** "Investeringsselskaber" translates "investment trusts" in the ESA 95.

The method of calculation for NACE 65, as regards output, intermediate consumption and value added, and the breakdown of output into services which are directly/ indirectly paid for, is illustrated using the activity which is by far the most important, namely 651200, Other monetary intermediation:

Table 3.45 Calculation of the output value of monetary intermediation

	FPI: <i>Finanstilsynet's</i> report – monetary intermediation	DKK million
	NB: <i>Nationalbank</i> annual report	
	Financial intermediation services paid for indirectly (FISIM)	
	FISIM on deposits	8 754
	FISIM on loans	19 767
=	FISIM, monetary intermediation, total	28 521
	Financial intermediation services paid for directly	
	FPI: Fees and charges	15 785
+	FPI: Ordinary income	2 531
=	Services paid for directly, according to accounts	18 316
+	Mark-up for savings banks under 100 million	187
+	Mark-up for savings banks and loans associations under 100 million	9
+	ROW monetary intermediation, branches in Denmark	1 466
-	Greenland banks	32
-	Danish monetary intermediation, branches in the ROW	905
=	Monetary intermediation services paid for directly, total	19 041
	FISIM, monetary intermediation, total	28 521
+	Monetary intermediation services paid for directly, total	19 041
+	NB: Output from the costs side	553
+	Own-produced software in industry 651000	1 348
+	Other	
=	Output of the <i>Nationalbank</i> and monetary intermediation, total	49 467

Table 3.46 Intermediate consumption, monetary intermediation

	FPI: <i>Finanstilsynet's</i> report – monetary intermediation	DKK million
	NB: <i>Nationalbank</i> annual report	
	FPI: Other administrative costs	10 774
+	FPI: Other operating expenditure	311
+	FPI: Fees etc. paid	2 625
+	Mark-up for savings banks under 100 million	125
+	Mark-up for savings and loan associations under 100 million	13
+	ROW monetary intermediation, branches in Denmark	359
-	Greenland banks	27
-	Danish monetary intermediation, branches in the ROW	762
=	Intermediate cons. excl. <i>Nationalbank</i> before software	13 418
+	NB: Intermediate consumption, <i>Nationalbank</i>	228
-	Correction for software purchased by industry 651000	608
-	Other taxes on production	135
+	Other subsidies on production	168
+	FISIM	903
=	Int. cons., <i>Nationalbank</i> and monetary intermediation, total	13 708

The method of calculation for NACE 66 is shown for both of the national accounts industries, since there are essential differences in the estimates for life insurance and pension funds on the one hand and non-life insurance on the other.

For *life insurance and pension funding*, output value is calculated from the costs point of view, with the addition of a profit element for net operating surplus of 1.5% of own funds. This percentage is low because the total return on own funds in life insurance corporations, in addition to net operating surplus, consists of property income and holding gains etc. which are not allocated to insured persons and are not included in bonus equalisation provisions. Bonus equalisation provisions in life and pension insurance are the funds of the policyholders and not part of the corporation's own funds. In contrast to life insurance provisions, they are not broken down by policyholder but are owned by the policyholders jointly. Their function is to avoid major fluctuations in the corporations' "account interest", i.e. the percentage interest which the policyholders receive in a given year on the funds they have saved with the corporation.

The reason for choosing this method of calculation is that the insurance corporations achieve very large holding gains on the funds invested, which are largely allocated to the accounts of insured persons in the form of life assurance provisions or to the policyholders jointly in the form of bonus equalisation provisions. Given that that share of the increase in provisions which comes from the allocation of holding gains cannot be identified and shown separately in the accounts, use of the formula in the ESA 95 paragraph 3.63 J would produce results which were economically meaningless, at least if the insurance corporations' portfolios included shares. Where shares are concerned, the major part of returns to investors often comes in the form of revaluation gains rather than dividends. Insurance corporations and pension funds take this into account when devising their policy for the allocation of earnings to their customers.

Table 3.47 illustrates the estimate for life insurance corporations. An identical estimate is made for pension funds, ATP and burial funds.

Table 3.47 Output of life insurance and pension funding

	FLI: <i>Finanstilsynet's</i> report – life insurance corporations	DKK million
	Life insurance corporations	
	Intermediate consumption, excl. FISIM	3 797
+	FLI: Wages and salaries	1 460
+	FLI: Contribution to dividends (R44) from wages, salaries and fees	8
+	FLI: Depreciations	305
+	Taxes (lønsafgift)	165
+	Return on own capital	713
=	Output of Life insurance corporations	6 448
+	Corresponding calculation for general pension funds	852
+	Corresponding calculation for company pension funds	92
+	Corresponding calculation for ATP	227
+	Corresponding calculation for burial funds	5
+	Other	20
=	Output of industry 660102	7 644

Table 3.48 estimates the intermediate consumption of life insurance corporations. For pension funds, ATP and burial funds, the estimates are made in exactly the same way.

Table 3.48 Intermediate consumption of life insurance and pension funding

	FLI: <i>Finanstilsynet's</i> report – life insurance corporations	DKK million
	Life insurance corporations	
	FLI: Administration fees	830
-	FLI: Other ordinary income	53
+	FLI: Rentals	71
+	FLI: Other staffing expenditure	1 027
+	FLI: Costs associated with investment activity	715
+	FLI: Other acquisition and administrative costs	1 838
+	FLI: Commissions to own sales staff	300
+	FLI: Other ordinary expenditure	13
-	FLI: Wages and salaries	1 450
-	FLI: Contribution to dividends (R44) from wages and salaries and fees	8
-	Purchase of computer software	47
+	Government fees which are sales of services	32
+	FLI: Commissions to other insurance corporations	529
=	Intermediate consumption in life insurance corporations	3 797
+	Corresponding calculation for general pension funds	658
+	Corresponding calculation for company pension funds	77
+	Corresponding calculation for ATP	117
+	Burial funds	3
+	FISIM in 660102	5
=	Intermediate consumption in industry 660102	4 657

Wages and salaries are deducted from the estimate of intermediate consumption because they are already included in certain other cost components. The rules for this are laid down unambiguously in *Finanstilsynet's* rules on reporting.

For *other insurance* (non-life), output value is calculated in accordance with the rule in the ESA 95 paragraph 3.63 J. In this case, those problems which the rule runs up against in the case of life insurance and pension funding do not apply to any noticeable extent, since the corporations do not noticeably increase insurance technical reserves as share prices rise. Property income allocated to policyholders (supplementary premiums) is calculated here (in contrast to life insurance and pension funding) by calculating the return on the corporations' portfolio of bonds and then using this percentage for the insurance technical reserves.

Where the calculation for life insurance and pension funding is a pro rata calculation based on the assumption that the policyholders' funds and the corporation's own funds are invested in the same portfolio of securities, this is not the case with the calculation for other insurance. Here, it is assumed that the insurance technical reserves are invested in (safe) bonds, whereas more risky investments in shares are considered to be financed by the corporations' own funds. There is therefore a different link between financial assets and insurance technical reserves on the one hand and own funds on the other. The reason is that the investment of insurance technical reserves has a much shorter time horizon for non-life than for life insurance.

The calculation of output for large non-life insurance corporations is illustrated in Table 3.49. Output for other non-life insurance corporations is measured the same way.

Table 3.49 Output, other insurance

	FLI: <i>Finanstilsynet's</i> report – large non-life insurance corporations	DKK million
	FLI: Premium income	35 987
-	FLI: Expenditure on claims	24 204
-	FLI: Increase in equalisation provisions	328
+	Supplementary premiums	2 668
+	Grossing up addition to supplementary premiums	510
-	Grossing up addition to increase equalisation provisions	57
+	FLI: Reinsurance commissions	866
+	Other ordinary income (deconsolidation)	1 583
+	Own-produced software	289
=	Output for large non-life insurance corporations	17 313
+	Corresponding calculation for other non-life insurances	1 948
+	Other	-311
=	Output of industry 660300	18 950

Intermediate consumption is calculated as shown in table 3.50:

Table 3.50: Intermediate consumption, other insurance

	FLI: <i>Finanstilsynet's</i> report – non-life insurance corporations	DKK million
	FLI: Administration fees	558
+	FLI: Rentals	412
+	FLI: Other staffing expenditure	5 029
+	FLI: Costs connected with investment activity	115
+	FLI: Other acquisition and administration costs	464
+	FLI: Commissions to own sales staff	1 366
+	FLI: Other ordinary expenditure	638
-	FLI: Wages and salaries	6 386
-	FLI: Contrib. to divid. (R.44) from wages, salaries and fees	10
-	Purchases of computer software	31
+	Public fees which are sales of services	250
+	FLI: Reinsurance premiums	5 485
-	Reinsurance share of claims	1 755
+	Grossing up addition to supplementary premiums	510
-	Grossing up addition to increase in equalisation provisions	57
+	Commissions to other insurance corporations	613
=	Intermediate consumption for large non-life insurance corp.	7 202
+	Corresponding calculation for other non-life insurance corporations	532
+	FISIM	14
=	Intermediate consumption of industry 660300	7 748

Breakdown of output by product

In the supply and use tables, the output of NACE J is divided into 14 products, one of which is own-produced software. The product breakdown is based on the breakdown of the financial corporations sector into sub-sectors and of the producer units which belong to them into industries. Industry 660300, non-life insurance, produces services connected with life insurance and pension funding, since non-life insurance corporations carry out administrative services for life insurance corporations and pension funds.

Breakdown of intermediate consumption by product

There are no regular costs structure statistics for the financial industries other than the summary costs structure included in the accounting plan in *Finanstilsynet's* Order on Accounting. The input structure in the financial industries has been based on this. The breakdown into individual products is to a certain extent based on estimates which in turn are based on common sense considerations. For the current year, an initial estimate is worked out for the input structure on the basis of the technical coefficients in the supply and use tables from previous years.

3.17 Real estate, renting and business activities (K)

Introduction

With the exception of industries 702009, dwellings, and 702040, the letting of non-residential buildings, NACE K is defined on the basis of a grouping of producer units. The above two industries are the exception, being defined by function and combining all letting of real estate, i.e. dwellings or non-residential premises, regardless of the legal or producer units in which the activity takes place. NACE K covers 14 of the national accounts' 130 industries, as can be seen in Table 3.51, which also shows that in 2003 NACE K accounted for 18.1% of value added of the Danish economy.

Table 3.51 NACE Section K's contribution to the gross value added of the economy

Industry	Output	Interm. cons.	Value added
701109 Real estate agents etc.	7 991	4 072	3 918
702009 Dwellings	121 130	30 933	90 198
702040 Letting of non-residential buildings.	39 931	14 267	25 664
710000 Letting of machinery and equip. etc.	13 870	8 175	5 695
721009 Computer activ. excl. software	11 459	6 939	4 519
722000 Software consultancy and supply	32 892	16 376	16 517
730001 Research and development (market)	5 038	3 088	1 950
730002 Rese. and devel. (other non-market)	3 697	1 140	2 557
741100 Legal activities	7 514	1 856	5 658
741200 Accounting, book-keeping, auditing	11 159	2 786	8 373
742009 Consulting engineers, architects, etc.	37 824	19 284	18 540
744000 Advertising	16 282	11 916	4 366
747000 Industrial cleaning	11 421	3 285	8 135
748009 Other business activities	37 790	15 983	21 807
Total NACE K	357 998	140 099	217 899
Percentage of the economy	15.0	11.8	18.1

The section covers 72 industries at the most detailed DK-NACE level. In all cases except one the calculations are made at that detailed level. The exception is the letting of dwellings, where the national accounts calculation system lumps three detailed DK-NACE industries together and combines the calculation with the calculation of the imputed rental value of owner-occupied housing.

Statistical sources

Apart from the two major industries, dwellings and the letting of non-residential buildings, where special sources and methods are used, the primary statistics source is in the vast majority of cases SLS-E statistics. Table 3.52 shows the primary statistics used.

Table 3.52 Statistical sources underlying the calculation of value added for NACE K

National accounts industries/DK-NACE industries	Source
701109 Real estate agents etc.	SLS-E statistics
702009 Dwellings	Housing censuses, rent surveys, the accounts of housing corporations, consumer surveys
702040 Letting of non-residential buildings	Calculated from the expenditure side: the sources underlying the calculations for all other industries
710000 Letting of machinery and equipment etc.	SLS-E statistics
721009 Computer activities excluding software consultancy and supply	SLS-E statistics
722000 Software consultancy and supply	SLS-E statistics
730001 Research and development (market)	SLS-E statistics
730002 Research and development (other non-market)	Central and local government accounts
741100 Legal activities	SLS-E statistics
741200 Accounting, book-keeping, auditing etc.	SLS-E statistics
742009 Consulting engineers, architects, etc.	Market: SLS-E statistics
	Government non-market: central government accounts etc.
744000 Advertising	SLS-E statistics
747000 Industrial cleaning	SLS-E statistics
748009 Other business activities	SLS-E statistics
	Government non-market: central government accounts etc.

Method of calculation

In all cases where the statistical sources are either SLS-E statistics or general government accounts, the standard method is followed for the estimate of output, intermediate consumption and value added, on the basis of these general sources. Below, we therefore describe only the two special, but exceptionally important, calculations for dwellings and the letting of non-residential buildings.

The calculations for *dwellings* comply with the method set out in Commission Regulation 1722/2005. As Table 3.51 shows, in 2003 dwellings accounted for 7.5% of the total value added of

the Danish economy. It is therefore clear that the reliability of the estimate of value added in this industry is crucial for the overall accuracy of the GNI estimate.

The most important principle in the Commission Regulation is that the countries have to use the stratification method to calculate the imputed rental value of owner-occupied dwellings. Denmark has always used this method. In short, it means that the total housing stock is divided into a number of strata on the basis of various stratification criteria. The criteria which are mandatory under the above Regulation are size and location. First of all, the average actual rental rate (yearly payment per square meter) is calculated for rented dwellings in each stratum and this average stratum rental rate is then used for owner-occupied dwellings within the same stratum to estimate the imputed rental value of owner-occupied housing.

The Regulation requires countries to operate with a minimum of 30 strata generated by at least three size classes and two types of location. In Denmark's case, the sources enable a much more detailed calculation to be made. For the 1999 benchmark calculation roughly a thousand strata were used effectively.

To estimate the output of both rented dwellings and owner-occupied dwellings in the Danish national accounts, a very thorough and detailed calculation of levels is made every 4-5 years, when large-scale rent surveys are carried out. The levels are projected during the intervening period using appropriate price and quantity indices. Thanks to the unique *Bygnings- og Boligregister* (BBR) annual information is available on the total housing stock divided according to numerous criteria. It is therefore not the quantity component in the price x quantity calculation formula which is missing on an annual basis but the price component. The large-scale 4-5 yearly housing survey – cf. Section 11.3 – is an extremely robust statistical source. It is carried out to provide an objective basis in the form of price information for the public assessments of real estate values. These public assessments are used both for the calculation for tax purposes of the rental value of owner-occupied housing, which is subject to income tax, and as a basis for the collection of property taxes. The rent surveys cover all property which is let comprising three or more tenancies. They therefore have an extremely high degree of coverage of rented housing in blocks of flats and of terraced, linked and semi-detached houses, whereas the degree of coverage for detached, single-family houses which are let is much lower. Compared with the information on rents which is available from the population and housing censuses used in Denmark until 1970, and which are still an important source of data in many countries, the quality of rent survey data must be assumed to be much higher because the information is collected from professional landlords as opposed to households which rent property, which are presumably more likely to misunderstand what has to be included in answers to questions and what should be omitted – for example, heating bills etc. which are included with actual rents. The rent survey covers only dwellings which are occupied all year round.

For the 4-5 yearly calculations of levels, rentals (actual and imputed) are compiled using the stratification method as a price x quantity calculation. Since the rent survey does not have 100% coverage, the figures have to be grossed up to the total population of rented dwellings. The grossing up also uses the stratification method. Simplified speaking, for each stratum, the average annual stratum rent according to the rent survey is multiplied by the annual average number of square metres let in the stratum in question. At the same time, the imputed rental value of owner-occupied housing is calculated by multiplying the annual average number of owner-occupied square metres in each stratum by the same annual average stratum rent. Finally, a separate calculation is made for holiday homes (weekend cottages etc.) and garages, carports, etc.

The estimate of output in "dwellings" in the Danish national accounts for 2003 is based on an estimate of levels for 1999 projected to 2003.

Below, the main principles behind the calculation of levels for 1999 are shown before discussing the projection to 2003. No validation of these figures is available as no rent survey has been conducted since 1999 with which to compare these projected figures for 2003.

The Danish estimate of levels for 1999 uses the following stratification criteria:

Table 3.53 Stratification criteria for the calculation of levels, 1999

Factors	Factor levels
Location: degree of urbanisation	1. HT- area 1
	2. HT- area 2
	3. HT- area 3
	4. Århus
	5. Other towns with at least 100 000 inhabitants
	6. Towns with 10 000-99 999 inhabitants
	7. Towns with 1 000-9 999 inhabitants
	8. Other areas
Rental status	1. Rented
	2. Used by owner, owner-occupied flats
	3. Used by owner, other dwellings
	4. Not known
Type	1. Farmhouses and detached houses
	2. Terraced, linked and semi-detached houses
	3. Dwellings in blocks of flats
	4. Dormitories, etc.
	5. Other
Quality	1. Group 1
	2. Group 2
	3. Not known
Size	1. -49 m^2
	2. 50-59 m^2
	3. 60-79 m^2
	4. 80-99 m^2
	5. 100-119 m^2
	6. 120-139 m^2
	7. 140-159 m^2
	8. 160-179 m^2
	9. 180-199 m^2
	10. 200 m^2 and [over]
	11. Not known
Year of construction	1. -1939
	2. 1940-1959
	3. 1960-1969
	4. 1970-1974
	5. 1975-1979
	6. 1980-1984
	7. 1985-1989
	8. 1990-1994
	9. 1995-1999
	10. 2000-
	11. Not known

The following should be noted as regards the individual stratification criteria:

Where the *location factor* is concerned, special attention should be paid to the HT [Copenhagen Transport Corporation] area. Around one-third of the population of Denmark lives in the region around Copenhagen, which for practical reasons is delimited as the geographical area covered by HT, which serves the actual city, the suburbs and other municipalities with a large number of commuters to and from the capital. This HT area consists of the Copenhagen municipality [*Københavns Kommune*], the Frederiksberg municipality and all municipalities within Copenhagen county [*Københavns Amt*], Frederiksberg county and Roskilde county. For stratification, the area is divided into three sub-areas, HT-1, HT-2 and HT-3, since it was assumed that there was a significant difference in the average level of rents, HT-1 being the most expensive and HT-3 the least expensive. The breakdown is based on the breakdown used by the country's leading estate agents and newspapers for the marketing of owner-occupied housing. There is no doubt that this breakdown is significant for the prices at which owner-occupied dwellings change hands, and it is assumed that the same applies to the levels of rent in rented housing. HT-1 consists of the following municipalities: Birkerød, Dragør, Gentofte, Hørsholm, Lyngby-Tårnbæk, Søllerød and Værløse. HT-2 consists of: Allerød, Ballerup, Brøndby, Farum, Fredensborg, Frederiksberg, Gladsaxe, Glostrup, Greve, Helsingør, Herlev, Hillerød, Hvidovre, Karlebo, København, Ledøje, Lejre, Roskilde, Rødovre, Solrød, Stenløse, Tårnby and Vallensbæk. HT-3 comprises: Albertslund, Bramsnæs, Frederikssund, Græsted-Gilleleje, Gundsø, Helsingør, Hundested, Hvalsø, Høje-Taastrup, Ishøj, Jægerspris, Køge, Ramsø, Skibby, Skovbo, Skævinge, Slangerup, Valsø and Ølstykke.

The calculation confirms that there is a significant difference in the levels of rents in these three sub-areas in and around Copenhagen.

Århus, the country's second largest city, is a factor level on its own, because rent levels in the city and its suburbs are noticeably different from the level in the other provincial towns in Denmark and are more or less on a par with rents in the Copenhagen area.

As regards the *quality factor*, quality group 1 comprises dwellings with water, drainage, own toilet, own bath, district heating or central heating from their own system and, for single family houses, with electric stoves or electric panel heating. Quality group 2 comprises dwellings which do not have one or more of the above facilities.

As regards the *year of construction*, the smaller intervals during the period 1960-1979 are due to the fact that there was a great deal of new housing built during that period, which, in view of the relatively high inflation at that time, had very different nominal construction costs. Since there is significant inertia in the establishment of rents, in which the nominal construction costs play a part, it is appropriate to work with smaller intervals of time during that period. For later years we have continued to use the five-year intervals.

In the housing census, there are a small number of dwellings where the rental status, type and quality group are not known. For all dwellings without an estimated rent from the stratified model, the average rental rate was used to compute their annual rents.

Disregarding rental status, which is not a significant stratification criterion for the actual calculation of total rents, we then have the following theoretical number of strata: $8 \times 4 \times 2 \times 10 \times 10 = 6\,400$. However, the actual number of significant strata used is perhaps only a sixth of this figure, roughly speaking a thousand strata. Which of course is still vastly in excess of the 30 required by the Decision.

For 1999 figures we continued to use rents from apartments multiplied by 1.02 also for detached houses, as motivated and explained in the 2002 GNP-inventory.

This calculation is supplemented by a calculation of total rents for holiday homes etc, which was carried out in exactly the same way as for all-year-round dwellings, but on the assumption that the rent for a holiday home in a given stratum was half of the rent for an all-year-round dwelling in the same stratum. Finally, a calculation was made for garages, carports, etc, covering garages which were not part of the actual dwelling and therefore included in the area of the dwelling. This latter (minor) share of garages is already covered by the calculation of rents for all-year-round dwellings.

The calculation for (external) garages, carports etc. for 1992 was as follows: the average construction costs per m^2 for garages and carports were calculated together with the corresponding construction costs for single-family houses. The ratio of these two figures multiplied by the ratio of the average size of garages etc. on the one hand to single family houses on the other and again multiplied by the average rent in single family houses was the calculated rental value of garages etc.

The rent survey for 1999 refers to the level of rents in January 1999. In order to obtain an estimate of price levels for all of 1999, an adjustment is made of the January price level to a mid-year level, taking into account the empirical pattern of rent increases over the months of the year. The quantity variable, i.e. the housing survey, relates to the housing stock as of 1 January of each year. In order to have total rents which represent the average stocks of the year 1999, we average over two sets of total rent figures, one set relating to the beginning-of-year stocks, and another set relating to end-of-year stocks.

After the corrections referred to above, we have total rents for 1999 for all dwellings in the economy, based on the average level of rents for the period and the average stock of dwellings. To obtain the national accounts estimate of total rents, however, there has to be various additional corrections for items included in the observed rents from the rent survey, items which are not to be considered as rents. The following items are excluded from the observed rents:

- payments for cold water delivery (fixed and variable fees)
- drainage charges
- refuse collection
- chimney sweeping
- insurance

These amounts are instead counted as household consumption expenditure under the relevant consumption expenditure categories. Concerning insurance, only the service element in the gross premiums is included.

There is also a correction for *vacant dwellings*. In accordance with the principles in the Commission Regulation on dwellings, no output value is assigned to dwellings which are vacant.

The figures thus calculated for total rents for all of 1999 are divided into two parts, one part which relates to the first half of 1999 and the rest relating to the second half of 1999 using separate adjustment factors for the owner occupied dwellings, the rented dwellings respectively and the holiday homes. This way we take account of the price increases between the first and the second half of the year under the restriction that, the sum of rent for the two parts exactly match the year total.

The level thus calculated for the first half of 1999 constitutes the benchmark which is then projected using a price and a quantity index until the next level calculation can be incorporated into the national accounts. The next time this will happen is unknown as the benchmark source of rents is not available. Between benchmark years we use the percentage distribution of total rents into actual rents and imputed rents in the benchmark calculation to distribute total rents into these two categories.

The benchmark for the first half of 1999 has the following values:

Table 3.54 Total rents for the first half of 1999 divided by type of dwelling

	DKK 1000
All-year-round dwellings	48 066 815
of which	
rented dwellings	16 883 648
owner-occupied dwellings	31 183 167
Holiday homes	1 464 455
Total rents for actual dwellings	49 531 270
Garages etc.	1 500 448
Total rents	51 031 718

The total rent is then projected from one six-month period to the next, starting with the projection from the first to the second half of 1999. The projections are made on a six-monthly basis because Statistics Denmark's rent surveys which are used for the calculation of the housing item in, for example, the consumer price index previously were (ended with 2001) six-monthly surveys. The projection from the first to the second half of 1999 is shown in Table 3.54 for all-year-round owner-occupied dwellings. The projection for the other types of dwellings is exactly the same. The value for garages etc. is projected on the basis of the calculated change in total rentals for all-year-round owner-occupied dwellings. Statistics Denmark's small-scale annual rent surveys, which are used for the consumer price index in particular, cover a sample of around 4 200 rented dwellings.

Table 3.55: Projection of the calculation of levels from the first half of 1999 to the second half of 1999, owner-occupied dwellings, all-year-round dwellings

		DKK 1000
(1)	Rents for stock in first half-year before correction for water, drainage, etc.	33 602 279
(2)	Rents for stock in first half-year after correction for water, drainage, etc.	31 181 167
(3)	Six-monthly increase in rents (first half of 1999 – second half of 1999)	1.784 %
(4)	Rents for the second half of 1999 of stock in previous half-year (1)x(1+(3))	34 201 861
(5)	Addition for new dwellings coming into use	275 273
(6)	Dwellings demolished	17 538
(7)	Total growth in the half-year (5)-(6)	257 735
(8)	Rents, stock in the second half of 1999 before correction for water etc. (4) +(7)	34 459 596
(9)	Water paid for via rents	1 238 039
(10)	Drainage charges paid for via rents	1 000 899
(11)	Deduction for vacant dwellings	181 970
(12)	Pure rents in the second half of 1999 (8)-(9)-(10)-(11)	32 037 688

The projection to 2003 uses exactly the same method as that shown in Table 3.55.

The *intermediate consumption* of dwellings is calculated separately for owner-occupied and rented dwellings. The calculation uses four sub-groups:

1. (ordinary) repair and maintenance expenditure
2. other intermediate consumption apart from stamp taxes and financial intermediation services paid for directly
3. stamp taxes
4. financial intermediation services paid for directly.

Expenditure on *ordinary repair and maintenance* in dwellings which are let refers solely to the expenditure defrayed by landlords. The tenants' expenditure on repairs and maintenance is counted as private consumption expenditure in consumption group 4300, and is normally limited to certain internal maintenance work such as painting and floor polishing when there are changes of tenants. The source for the calculation of landlords' repair and maintenance expenditure is accounts from the non-profit (social) housing associations, which represent in total around half a million rented dwellings and can reasonably be considered to be representative of the rental sector as a whole.

For owner-occupied housing, expenditure on minor, routine repairs and maintenance is counted as private consumption in the households under group 4300, by analogy with the treatment of the corresponding expenditure of tenants. Major expenditure items, which in the case of rented dwellings should normally be defrayed by the landlord, are considered to be intermediate consumption when the dwellings are owner-occupied. Major repair and improvement work is not included in the estimate of intermediate consumption but counts as capital formation in housing construction. For owner-occupied dwellings, the source for the estimate of repair and maintenance expenditure is the household budget survey (FU) – cf. Section 11.3. A further element of the total

repair and maintenance expenditure is that paid for by insurance companies. Half of the claims due, received by the housing industry, are assumed to relate to repair and maintenance expenditure.

For *other intermediate consumption apart from stamp taxes and financial intermediation services paid for directly*, the sources are the same as for expenditure on repair and maintenance. In the nature of things, this item is a minor one in the case of owner-occupied dwellings, where it must include, for example, administrative expenditure relating to owners' associations in owner-occupied flats.

Expenditure on refuse collection, chimney sweeping, insurance services etc. will normally be included in the observed rent. For the national accounts calculations for dwellings, the calculated total rental is reduced by the amount of these items, which are transferred to private household consumption of the services in question, instead of being considered as the private consumption of rents. Consequently, the expenditure in question is not included in the estimate of intermediate consumption for dwellings. Counting the figures this way in accordance with the international classification of the consumption of households, COICOP, does not, of course, affect the estimate of GNI, but relates solely to the breakdown of private consumption into consumption groups.

Stamp taxes, which count as intermediate consumption in dwellings, relate to loans for the financing of investments in housing and thus the output of dwelling services. Like other transaction costs connected with the transfer of real estate, stamp taxes on the transfer of property rights (deeds etc.) are treated - in line with ESA 95 paragraph 4.20 b) - as gross fixed capital formation. Stamp taxes on loans for the financing of investments in housing are estimated on the basis of the stamp tax rates laid down in the legislation, statistics for monetary financial institutions and the total revenue from stamp taxes taken from general government statistics.

The *financial intermediation services paid for directly* which are included in intermediate consumption in dwellings are fees etc. connected with mortgages taken out to finance purchases of dwellings. In Denmark, the vast majority of housing loans are "*realkreditlån*" [mortgage loans] granted by a special type of monetary financial institution known as a "*realkreditselskab*" [mortgage corporation]. These monetary financial institutions are funded almost entirely by the issue of bonds and take mortgages on the property for which they issue loans. The institutions demand "contributions" from borrowers, typically a percentage of the remaining debt. These contributions, which are invoiced to the borrowers, are treated as financial intermediation services paid for directly. In addition, there are financial intermediation services on the bank loans customarily taken out to partly finance housing purchases. The amount allocated to intermediate consumption in the "dwellings" industry is calculated on the basis of the total contributions to mortgage credit institutions and the total amount paid for bank services in the light of the outstanding debt on dwellings. *Financial intermediation services paid for indirectly (FISIM)* allocated to the dwellings industry is relatively low for reasons described above. The calculation and allocation of FISIM is described in chapter 9.

The figures for industry 702040, *the letting of non-residential buildings*, are calculated as described from the expenditure point of view. The industry's output is estimated as the sum of non-residential rent expenditure in all other industries in the economy. These figures are estimated separately in the intermediate system at the most detailed DK-NACE level and are available separately in the target total module under code 2020, cf. the table of the functional target total module in Section 1.3.9.1.1.

This ensures that the output of non-residential rentals and rentals which are posted as inputs in other industries are consistent. It is difficult to ensure this if output is calculated from the supply side, owing to the widespread *secondary* activity connected with the letting of non-residential premises, on which there is no direct information available in the detailed accounting information from the corporations involved.

Intermediate consumption is calculated from the ratio of intermediate consumption to output in the "letting of dwellings" industry. The reasoning is that the aggregate accounting figures underlying the calculations for the letting of dwellings are on the whole more representative of the letting of non-residential premises than the available accounts from corporations whose primary activity is non-residential letting. But since the letting of dwellings and of non-residential buildings are related activities, the input percentage, i.e. the ratio of intermediate consumption to output, may be considered to have been determined with a good degree of certainty.

Since 1999 the industry has been covered by industrial accounting statistics. However, on the output side the industrial accounting statistics gives rather unstable results and a lower turnover compared to the compilation from the expenditure point of view. This is a rather strong indication that a compilation from the expenditure side is preferable. On the input side, a comparison of the input percentage from the letting of dwellings, which is used, has been made with the input percentage from the industrial accounts statistics for the years 1999-2001. It was concluded at the time, that it was not necessary to make any corrections to the input percentage used. Table 3.56, shows input percentages from the industrial accounts statistics. It can be seen that, apart from the obvious problems with 1999, the input percentage is about 25 percent. The input percentage used is 26.8.

Table 3.56: Input in industry 702040 Letting of non-residential buildings. 1000 DKK.

Year	Output	Input				Value added
		Goods and services	Repair and maintenance	Other indir. prod. costs	Total	
1999	21.543.598	7.706.753	481.118	1.118.690	9.306.561	12.237.037
2000	14.944.555	1.034.482	849.860	1.875.365	3.759.707	11.184.848
2001	19.523.031	1.496.060	901.498	2.186.516	4.584.074	14.938.957
Input percentages						
1999		35,8	2,2	5,2	43,2	
2000		6,9	5,7	12,5	25,2	
2001		7,7	4,6	11,2	23,5	

Breakdown of output by product

For the industries in NACE K other than dwellings and the letting of non-residential buildings, output is primarily broken down by product in such a way that products are defined on the basis of the most detailed industries in the DK-NACE so that the total output value in one of these detailed industries is allocated to a product with the same name as the industry.

The output of the "dwellings" industry in 2003 was divided by product as shown in Table 3.57.

Table 3.57: Breakdown of output in the "dwellings" industry by product

Product number	Text	Value DKK 1000
F702000	Fringe benefits, free housing	155 263
F711000	Fringe benefits, free car	14 777
F713310	Fringe benefits, free pc	2 716
K722000	Own-produced software	37 809
T000005	Royalties and license payments, excluding software	5 622
T702001	Letting of dwellings	39 952 155
T702002	Imputed rental value of owner-occupied dwellings	77 411 145
T702003	Garages etc. not an integral part of the dwellings	3 550 730
Total dwellings		121 130 217

The output of the "letting of non-residential buildings" industry covers five products. All non-residential letting is one product and there are also small amounts of output of the fringe benefits "free car" and "free pc" as well as of Royalties, ex. software and of own-account software in the relevant product balance.

Breakdown of intermediate consumption by product

Industries other than dwellings and the letting of non-residential buildings

There are no regular costs structure statistics for these industries other than the summary costs structure included in the SLS-E accounting plan. The input structure is based on this. The breakdown into individual products is to a certain extent based on estimates which in turn are based on common sense considerations. For the current year, an initial estimate of input structure is worked out from the technical coefficients in the supply and use tables from previous years.

Dwellings

The breakdown by product is self-evident in three of the four expenditure categories referred to in Section 3.17.3. The fourth – other intermediate consumption apart from stamp taxes and financial intermediation services paid for directly – is broken down by product on the basis of information in the accounts of non-profit housing corporations and, if this is not sufficiently detailed, on the basis of common sense considerations concerning, for example, the input of cleaning services in blocks of flats.

Letting of non-residential buildings

The same applies to this industry as to dwellings.

3.18 Public administration and defence; compulsory social security (L)

Introduction

NACE L is defined on the basis of a grouping of producer units. It covers five of the national accounts' 130 industries. In 2003, virtually the whole group consisted of government (other) non-market output, the exception being the national accounts industry 752001 Security services, which produces market output. As shown in Table 3.58, NACE L accounted for 6.5% of value added of the Danish economy in 2003.

Table 3.58 NACE L's contribution to the gross value added of the economy

Industry	Output	Intermediate consumption	Value added at basic prices
751100 General (overall) public service activities	40 842	12 421	28 421
751209 Regulation of public service activities exc. for business	17 893	5 790	12 103
751300 Regulation of and contribution to more efficient operation of business	16 893	5 473	11 420
752001 Rescue Services	3 465	1 237	2 228
752002 Defence, police and justice	38 523	15 090	23 432
Total NACE L	117 617	40 012	77 606
Percentage of the economy	5.0	3.5	6.5

Statistical sources

In all cases other than the market output of 752001 rescue services, the source is the accounts in *Databasen for Integrerede Offentlige Regnskaber (DIOR)* [the database for integrated public accounts] – cf. Section 11.1. This database covers central government, local government and social security fund accounts, plus all other units included in national accounts S.13. The source for the calculations of 752001 rescue services, is the SLS-E statistics – cf. Section 3.1.4.

Table 3.59 Statistical sources underlying the calculation of value added for NACE L

National accounts industry/DK-NACE industry	Source
751100 General (overall) public service activities	Central government accounts, local government accounts, etc.
751209 Regulation of public service activities exc. for business	Central government accounts, local government accounts, etc.
751300 Regulation of and contribution to more efficient operation of business	Central government accounts, local government accounts, etc.
752001 Rescue services	SLS-E statistics.
752002 Defence, police and justice	Central government accounts, local government accounts, etc.

Method of calculation

The calculations use the standard methods for general, transversal sources in the form of *Databasen for Integrerede Offentlige Regnskaber (DIOR)* and the SLS-E statistics.

Breakdown of output by product

The output of government non-market services is divided by product on the basis of the various uses of the products. For each national accounts branch, a distinction is made at least between the output of government non-market services for government consumption, for external sales income other than from canteen sales, sales income relating to canteens and sales income relating to internal supplies between public institutions. In addition, there is own-produced software. The market output in 752001 Rescue services is for a single product, namely rescue services.

Breakdown of intermediate consumption by product

The input structure for general government is generally based on the breakdown in central and local government accounts, which was much more detailed in the mid-1980s than it is now. The detailed breakdown of intermediate consumption was originally based on these detailed accounts from the 1980s. In the current year, the input structure is estimated on the basis of the technical coefficients from previous years. This is also the case for 2003. For the coming years, Statistics Denmark is undertaking cost structure surveys for general government. The surveys intend to cover the whole general government sector in the course of five years.

3.19 Education (M)

Introduction

NACE M is defined on the basis of a grouping of producer units comprising five of the national accounts' 130 industries. In Denmark 2003, virtually the whole group consisted of government (other) non-market output, the exception being 804001 Adult and other education (market). In Denmark, what is known as "private schools" for children are without exception part of S.13, and are thus government non-market producers in that over 50% of production costs are met by public funds and the public authorities to a large extent control these institutions via the rules for award of grants. As shown in Table 3.60, NACE M represented 5.8% of the value added of the Danish economy in 2003.

Table 3.60 NACE M's contribution to the gross value added of the economy

Industry	Output	Intermediate consumption	Value added at basic prices
801000 Primary education	44 426	9 591	34 834
802000 Secondary education	18 407	5 164	13 243
803000 Higher education	17 420	4 822	12 598
804001 Adult and other education (market)	2 525	1 007	1 518
804002 Adult and other education (non-market)	9 747	2 845	6 902
Total NACE M	92 525	23 429	69 095
Percentage of the economy	3.9	2.0	5.8

Statistical sources

In all cases other than market output in industry 804001 Adult and other education (market), the source is the accounts in *Databasen for Integrerede Offentlige Regnskaber (DIOR)*. This database covers central government, local government and social security fund accounts, plus all other units included in national accounts S.13. The source for the calculations of the market activity in 804001 is the SLS-E statistics – cf. Section 3.1.4.

Table 3.61 Statistical sources underlying the calculation of value added for NACE M

National accounts industry/DK-NACE industry	Source
801000 Primary education	Central government account, local government accounts, etc.
802000 Secondary education	Central government account, local government accounts, etc.
803000 Higher education	Central government account, local government accounts, etc.
804001 Adult and other education (market)	SLS-E statistics
804002 Adult and other education (non-market)	Central government account, local government accounts, etc.

Method of calculation

The calculations use the standard methods for general, transversal sources in the form of *Databasen for Integrerede Offentlige Regnskaber (DIOR)* and the SLS-E statistics.

Breakdown of output by product

The output of government non-market services is broken down by product on the basis of the various uses of the products. For each national accounts branch, a distinction is made at least between the output of government non-market services for government consumption, for external sales income other than from canteen sales, sales income relating to canteens and sales income relating to internal supplies between public institutions. In addition, there is own-produced software. The market output in 804001 covers three products, namely driving schools etc., other market education and “black” education.

Breakdown of intermediate consumption by product

The input structure for general government is generally based on the breakdown in central and local government accounts, which was much more detailed in the mid-1980s than it is now. The detailed breakdown of intermediate consumption was originally based on these detailed accounts from the 1980s. In the current year, the input structure is estimated on the basis of the technical coefficients from previous years. This is also the case for 2003. For the coming years, Statistics Denmark is undertaking cost structure surveys for general government. The surveys intend to cover the whole general government sector in the course of five years.

3.20 Health and social work (N)**Introduction**

NACE N is defined on the basis of a grouping of producer units. It covers seven of the national accounts' 130 industries. As Table 3.62 shows, it accounted for 11.0% of the value added of the Danish economy in 2003.

Table 3.62 NACE N's contribution to gross value added of the economy

Industry	Output	Intermediate consumption	Value added at basic prices
851100 Hospital activities	55 332	18 644	36 688
851209 Medical, dental, veterinary activities etc.	25 686	7 376	18 310
853109 Social institutions etc. for children	42 904	9 885	33 019
853209 Social institutions etc. for adults	57 250	13 337	43 913
Total NACE N	181 172	49 242	131 930
Percentage of the economy	7.7	4.3	11.0

Statistical sources

For government, non-market output, the source is the accounts in *Databasen for Integrerede Offentlige Regnskaber (DIOR)*, which covers central government, local government and social security fund accounts, plus all other units included in national accounts S.13. For market output, the source is SLS-E statistics. The sources can be seen in the table below:

Table 3.63 Statistical sources underlying the calculation of value added for NACE N

National accounts industry/DK-NACE industry	Source
851100 Hospital activities	
851101 Private market	SLS-E statistics
851102 Government non-market	General government accounts (DIOR)
851209 Medical, dental, veterinary activities.	
851202 Government non-market output	General government accounts (DIOR)
Other DK-NACE industries in 851209	SLS-E statistics
853109 Social institutions etc. for children	General government accounts (DIOR)
853209 Social institutions etc. for adults	General government accounts (DIOR)

Method of calculation

The calculations use the standard methods for general transversal sources in the form of *Databasen for Integrerede Offentlige Regnskaber (DIOR)* and the SLS-E statistics.

Breakdown of output by product

The output of government non-market services is divided by product on the basis of the various uses of the products. For each national accounts branch, a distinction is made at least between the output of government non-market services for government consumption, for external sales income and sales income related to internal supplies between public institutions. In addition, there is own-produced software. The output of market producers in NACE N is divided into six products plus fringe benefits and own-produced software.

Breakdown of intermediate consumption by product

The input structure for general government is generally based on the breakdown in the central and local government accounts, which was much more detailed in the mid-1980s than it is now. The detailed breakdown of intermediate consumption was originally based on these detailed accounts from the 1980s. In the current year, the input structure is estimated on the basis of the technical coefficients from previous years. This is also the case for 2003. For the coming years, Statistics Denmark is undertaking cost structure surveys for general government. The surveys intend to cover the whole general government sector in the course of five years.

3.21 Other community, social and personal activities (O)

Introduction

NACE O is defined on the basis of a grouping of producer units and consists of seven of the national accounts' 130 industries. As Table 3.64 shows, it accounted for 4.2% of value added of the Danish economy in 2003.

Table 3.64 NACE O's contribution to the gross value added of the economy OK ATH 03/01

Industry	Output	Intermediate consumption	Value added at basic prices
900010 Sewage removal and disposal	6 298	3 005	3 293
900020 Refuse collection and sanitation	7 111	4 651	2 460
900030 Refuse dumps and refuse disposal plants	3 889	2 467	1 422
910000 Activities of membership organisations	19 606	5 275	14 331
920001 Recreational, cultural, sporting activities (market)	31 569	14 297	17 272
920002 Recreational, cultural, sporting activities (non-market)	10 165	4 010	6 155
930009 Other service activities	8 975	3 197	5 778
Total NACE O	87 613	36 902	50 711
Percentage of the economy	3.7	3.2	4.2

Statistical sources

The statistical sources underlying the national accounts calculations for NACE O can be seen in the table below:

Table 3.65 Statistical sources underlying the calculation of value added for NACE O

National accounts industry/DK-NACE industry	Source
900010 Sewage removal and disposal	Accounts statistics for industries predominated by public corporations
900020 Refuse collection and sanitation	Accounts statistics for industries predominated by public corporations
900030 Refuse dumps and refuse disposal plants	Accounts statistics for industries predominated by public corporations
910000 Activities of membership organisations	
910001 Private institutions	Statistics on wages and salaries, trade union accounts
910002 Government non-market	Government accounts (DIOR)
920001 Recreational, cultural, sporting activities (market)	
921100 Motion picture and video production	SLS-E statistics
921200 Motion picture and video distribution	SLS-E statistics
921300 Motion picture projection	SLS-E statistics
922010 Television activities	Account statistics for industries predominated by public corporations
922020 Radio activities	Accounts statistics for industries predominated by public corporations
923110 Live theatrical presentations, concerts and opera production	SLS-E statistics
923120 Activities of individual artists	Statistics on wages and salaries, numbers of artists, statistics on culture
923200 Operation of arts facilities	SLS-E statistics
923300 Fair and amusement park activities	SLS-E statistics
923400 Other entertainment activities n.e.c.	SLS-E statistics
924000 News agency activities	SLS-E statistics
925200 Museum activities etc.	SLS-E statistics
925300 Botanical and zoological gardens	SLS-E statistics
926110 Sports centres and public swimming baths	SLS-E statistics
926190 Other sports facilities	SLS-E statistics
926210 Sports clubs	SLS-E statistics
926220 Yachting harbours (marinas)	Accounts statistics for industries predominated by public corporations
926290 Other sporting activities n.e.c.	SLS-E statistics
927100 Gambling and betting activities	Accounts statistics for industries predominated by public corporations
927200 Other recreational activities n.e.c.	SLS-E statistics
930002 Recreational, cultural, sporting activities (non-market)	General government accounts (DIOR)
930009 Other service activities	SLS-E statistics

Method of calculation

The calculations for all DK-NACE industries other than 923120 Activities of individual artists comply with the standard methods for general transversal sources in the form of *Databasen for Integrerede Offentlige Regnskaber* (DIOR), SLS-E statistics and the accounts statistics for industries predominated by general government. For industry 923120, activities of individual artists, the calculation is divided in two. First of all, the output of paintings, lithographs and sculptures etc. is calculated using a price x quantity calculation. Next, the much greater value of royalties and artistic originals is calculated from the information on royalties in statistics on culture.

The calculation of the output value of paintings, lithographs and sculptures etc. is based on average earnings per employee in the whole of NACE 92 taken together, as found in the ERE statistics. This figure is multiplied by the total number of members of *Billedkunstnernes Forening* [the Pictorial Artists Association], the association of Danish designers and the association of Danish craftsmen-designers. It is thus assumed that the artists' average *sales* correspond to the earnings of an employee in the same field.

For the output of royalties (services output) information from statistics on culture which refers to royalty payments for art and culture is used directly (information from KODA, NCB (Nordic Copyright Bureau), COPY DAN and Gramex). In the absence of statistics on the value of original works produced, in each period this is considered to be equal to the royalty income for the period.

Intermediate consumption is calculated using an input percentage derived from SLS-E figures. Creative artists constitute a field which, by its very nature, will almost always have scant coverage in the form of accounts. In Denmark's case, many fall below the turnover threshold of DKK 500 000 for the SLS-E returns. There is not considered to be any intermediate consumption corresponding to royalties and the output of artistic originals in branch 923120. The intermediate consumption connected to those product transactions is assumed to be included as expenditure in publishers, music publishers, recording companies, film and video production companies etc. which have made facilities available to the artists with whom they are working.

Breakdown of output by product

The output of NACE O is divided into 79 products, 63 of which represent market activity and 16 government non-market output. In addition, there is production of fringe benefits, own account software and "black economy".

Breakdown of intermediate consumption by product

There are no regular costs structure statistics on the market output of these industries other than the summary costs structure included in the SLS-E accounting plan and in the accounting statistics for industries where public corporations predominate. The input structure is based on those statistics. The breakdown into individual products has to a certain extent been based on estimates which in turn were based on common sense considerations. For the current year, an initial estimate is made for the input structure on the basis of the technical coefficients in the supply and use tables from previous years.

The input structure for general government (non-market output) is generally based on the breakdown in the central and local government accounts, which was much more detailed in the mid-1980s than it is now. The detailed breakdown of intermediate consumption was originally based on these detailed accounts from the 1980's. In the current year, the input structure is estimated on the basis of the technical coefficients from previous years. This is also the case for 2003. For the coming years, Statistics Denmark is undertaking cost structure surveys for general government. The surveys intend to cover the whole general government sector in the course of five years.

3.22 Private households with employed persons (P)

Introduction

NACE P, which is defined on the basis of a grouping of producer units, consists of only one of the national accounts' 130 industries. As Table 3.66 shows, it accounted for 0.2% of the value added of the Danish economy in 2003.

Table 3.66 NACE P's contribution to the gross value added of the economy

Industry	Output	Intermediate consumption	Value added at basic prices
950000 Private households with employed persons	1 807	0	1 807
Total NACE P	1 807	0	1 807
Percentage of the economy	0.1	0	0.2

Statistical sources

The majority of the activity in this industry is linked to tax-free income either in the form of genuine work in the black economy or because the persons involved have income which falls below the income tax limit and who therefore do not report any income to the tax authorities. Regular "legitimate" economic activity in this industry consists mainly of home help for disabled people employed by households, treated as a social transfer in kind purchased by general government and made available to households. These values are taken directly from government accounts. The remaining "legitimate" activity is small and of minor importance and is projected with the same percentages as the black activity.

The level is calculated on the basis of EU-harmonised labour force survey (LFS), which in Denmark is now called *Arbejdskraftundersøgelsen* (AKU), extended to include various questions on activity in the black economy. The questions covered information on both the number of hours worked and the relevant income. One-third of the LFS respondents (some 6 000) took part in the ad hoc survey, which was partly financed by the EU. The survey was grossed up to the total population.

Table 3.67 Statistical sources underlying the calculation of value added for NACE P

National accounts industry/ DK-NACE industry	Source
950000 Private households with employed persons	periodically surveys, net price index, government accounts

Method of calculation

The benchmark values for the years 1992 and 2004 are both used and the figures in the years between the two benchmarks years are stipulated. From 2004 and onwards values will be projected in the current years using changes in the net price index (consumer price index excluding taxes on products and subsidies) for cleaning. This means assuming that hours of work remain constant. The price index reflects changes in cleaning rates charged by professional firms. A new benchmark will next be established when resources can be made available to extend the labour force surveys to include special questions on work in the black economy.

Breakdown of output by product

The output value is allocated to two different products. One product covering the black activity and one product covering the regular economic activity.

Intermediate consumption by product

By definition, there is no intermediate consumption in this industry.

3.23 Treatment of extra territorial organisations and bodies (Q)

International organisations within the borders of the Kingdom of Denmark are not part of Denmark's economic territory. The output of these organisations is not included in Danish GDP. The wages and salaries which they pay to Danish residents are included in Denmark's GNI via the balance-of-payments items for wages and salaries from the rest of the world.

3.24 Taxes on products, excluding VAT

Table 3.68 shows total taxes on products excluding VAT which amounts to 5.9 percent of GDP. Of total taxes excluding VAT of 83 191 mill. DKK, 2 341 mill. DKK go to the EU (duties and import taxes). Table 3.69 shows taxes on products excluding VAT by type of tax. All large taxes are shown by type while minor taxes are lumped together in *other*.

Table 3.68 Taxes on products excluding VAT, 2003. Total.

DKK million	To general government	To the EU	Taxes on products excluding VAT, total
Taxes on products excluding VAT	80 850	2 341	83 191
Percentage of GDP			5.9

Table 3.69 Taxes on products excluding VAT, 2003. By type of tax.

DKK million	
Taxes on products excluding VAT, total	83 191
<i>of which:</i>	
Petrol	10 445
Car registration	13 052
Chocolate	7 678
Beer	1 181
Wine	1 474
Alcoholic beverages	1 166
Electricity	1 439
Certain oil products	8 455
Coal	7 435
Carbondioxid (CO ₂)	1 679
Piped water	4 826
Natural gas	1 417
Stamp duties	3 622
Third party liability insurance on cars	6 169
Oil pipeline Other	1 946
Other	10 064

As required by ESA 95 paragraphs 4.26-4.27, taxes on products are recorded when the activities etc. occur as the amount which the general government sector or the EU has a *claim on*, i.e. tax liability or tax assessed. Tax assessments are recorded by the tax authorities, *Skat*, with an indication of the period of the transactions to which they relate. Taxes on products excluding VAT are therefore recorded on an accrual basis. Denmark thus bases its figures for taxes on products excluding VAT on tax assessments and does not need to have recourse to corrections for “cash data”, i.e. figures for taxes actually paid compiled on the date of payment.

In contravention of the fundamental principle of accruals in SNA 93 and ESA 95, in 2000 the Council approved an amendment to the ESA 95 Regulation which prevents countries from including the tax revenue which gives rise to provisions for losses on bad debts or is written-off as a result of bankruptcies, etc. in the estimate of the “government deficit”, i.e. net lending/net borrowing of general government (2516/2000). The amendment gives countries a certain amount of flexibility, however, as regards the way in which uncollectable taxes are accounted for in the accounting system, provided the effect on the “government deficit”, i.e. the net lending/net borrowing of Sector S.13, general government, remains the same. The solution, which Denmark applies, is simply to count the tax revenue, which has not been collected, as a capital transfer from general government to the debtor sectors. In this way, the change in the national accounts may be limited to a simple entry in the capital account and the accrual principle remains intact in all other respects.

3.25 VAT

The underlying principles for estimation and periodisation of VAT are the same as for taxes on products excluding VAT as described in section 3.24.

As mentioned in Chapter 8, the Danish national accounts differ from ESA 95 regarding the treatment of EU's own resources from VAT, the "third own resource". According to ESA 95, paragraph 4.14, this value should be recorded as a tax collected directly by the EU from residents in Member States (D.211). In the Danish national accounts the *total* VAT revenue is considered to be paid to the national general government sector S.13. The EU's VAT-based own resource is then recorded as a current transfer (D.74) from central government to the EU.

Table 3.70 shows total VAT revenue in 2003 which amounts to 135 billion DKK and 9.6 percent of GDP.

Table 3.70: VAT 2003

DKK million	To general government	To the EU	Taxes on products excluding VAT, total
VAT	135 088	0	135 088
Percentage of GDP			9.6

Compared with some countries, the Danish VAT system is very simple in that there are only two rates, a standard rate of 25 % in 2003 and a 0% rate for certain product groups such as passenger transport and newspapers. In addition, some activities (producer units) do not have to register for VAT, i.e. they do not collect outgoing VAT on their sales and conversely cannot deduct incoming VAT from their purchases. The only significant case of this for market output is financial services and property administration. In practice, all non-financial market activity except a few service activities, of which passenger transport is far the most important, has to register for VAT in Denmark.

One standard way of validating the degree of coverage in the national accounts is to compare the theoretical VAT resources as established in the national accounts with actual VAT revenue. This check works particularly well when there is a simple VAT structure as there is in Denmark, where the uncertainty resulting from the use of differential rates is virtually absent¹⁶. Theoretical VAT resources are defined as the VAT revenue which would be produced if all actors in the economy paid VAT according to the legislation. The calculation is as follows: The rate for non-deductible VAT which would apply if everybody complied in full with the VAT legislation is linked to each individual use of each of the 2 350 or so products in the (supply and) use tables. Actual VAT revenue is equal to VAT assessed on an accrual basis, as described in Section 3.25.2. VAT in the Danish national accounts is adjusted to this amount. The total VAT actually in the cells of the supply and use tables with around 2 350 product balances is equal to actual VAT resources.

¹⁶ Even with 2 350 product balances some product classifications will cover services with both 25% and 0% VAT-rates. The choice of average VAT-rate for such product groups relies on assumptions that may be more or less correct. In specific circumstances certain uses are VAT-exempt. Identification of these circumstances will also to some degree rely on assumptions. A VAT-system with differentiated rates will of course add to this kind of problems. However the estimated VAT must be assumed to be more accurate when it can be based on a high level of detail compared to a calculation based on less detail.

When theoretical VAT resources are estimated, it is often the case that the statutory rate is used as the theoretical rate. This is not, however, the actual theoretical rate if, for the estimate of VAT liability, VAT is deductible in the case of bad debts. The Sixth VAT Directive allows such deductions, which apply in Denmark. The deduction is as follows: an enterprise which is registered for VAT may, for the estimate of outgoing VAT, deduct the outgoing VAT imputed during previous periods but which has never been paid to the enterprise by its debtors as a result of bankruptcy, for example. The actual theoretical rate is therefore lower than the statutory rate.

The tax authorities do not collect information on the size of the deduction for outgoing VAT connected with bad debts. Based on, *inter alia*, banks' provisions and losses, Statistics Denmark has cautiously estimated those bad debts at just under 2 % of VAT revenue. Due to lack of more precise information, this percentage has remained unchanged year after year for the calculation of theoretical VAT resources. For product groups with the statutory standard rate of 25 %, a rate of 24.54% is used, a cautious estimate about which there is a substantial degree of uncertainty. Actual deductions may well be considerably greater, in which case the theoretical rate in the calculation should be lower. The central government credit risk involves not only VAT revenue but the gross amount of outgoing VAT, which is much greater. Bad debts may arise anywhere in the chain from the original producer to the final purchaser.

To make the following comparison of theoretical and actual VAT comparable with the results in other countries, the comparison has been made using the theoretical rate calculated both as the statutory rate and as the estimated actual theoretical rate following legal deductions for bad debts. In the following table, the first calculation of the percentage discrepancy is marked I and the second as II.

Table 3.71 Comparison of theoretical and actual VAT revenue, 1995-2003

Year	Theoretical VAT revenue, with statutory rate (1)	Theoretical VAT revenue with deduction for debtors (2)	Actual VAT revenue (VAT assessments) (3)	Percentage difference between theoretical and actual VAT I $((1)-(3))/(3) \times 100$	Percentage difference between theoretical and actual VAT II $((2)-(3))/(3) \times 100$
1995	103 980 327	102 067 089	96 316 451	7,96	5,97
1996	109 650 975	107 633 397	103 320 000	6,13	4,17
1997	116 407 666	114 265 765	109 340 000	6,46	4,50
1998	121 004 020	118 777 546	113 832 000	6,30	4,34
1999	125 566 033	123 255 618	118 975 799	5,54	3,60
2000	132 210 834	129 778 155	123 776 600	6,81	4,85
2001	136 574 634	134 061 661	128 549 636	6,24	4,29
2002	141 069 830	138 474 145	132 394 335	6,55	4,59
2003	144 306 533	141 651 293	135 087 823	6,82	4,86

The figures shown are based on the national accounts after the “data-revision” mentioned in chapter 2. For all years from 1995 to 2000 where a comparison with data from before the revision is possible, the differences between theoretical and actual VAT -revenue have been reduced in the revised figures.

Except in 1995 with a higher than normal difference¹⁷ and 1999 where the difference is low, the percentage difference between theoretical and actual VAT has remained reasonably constant.

The Commission Decision (98/527/EC, Euratom) on the treatment for national accounts purposes of VAT fraud (discrepancies between theoretical VAT receipts and actual VAT receipts) obliges Member States to *compare* theoretical and actual VAT and to *analyse* the difference to ensure that the effect which the treatment of VAT fraud has on GNP is correct. In all cases where an enterprise registered for VAT has collected VAT from the customer but does not remit it to the tax authorities (for example, when sales do not pass through the cash register), with output-based GDP there has to be an allowance for this fraudulently retained VAT to ensure that the estimate includes all value added. The expenditure-based estimate in principle records the purchaser's actual payment and thus in principle automatically includes the VAT withheld (the evasion). The problem here, of course, is to observe such purchases in practice. In the Commission Decision, VAT which is not remitted is referred to as "evasion without complicity". The opposite is "evasion with complicity", e.g. work done in the black economy and not invoiced. In this latter case, of course, there should be no allowance for VAT not remitted, since the price the purchaser has paid does not include any VAT.

The total difference between theoretical VAT when the rates required by law are applied, ignoring deductions for VAT connected with bad debts, and actual VAT revenue was DKK 9 219 million in 2003. The national accounts estimate of deductions for bad debts of just under 2% may account for DKK 2 655 million of this difference. In addition, VAT corresponding to the explicit allowances for work in the black economy and underreporting etc. account for DKK 2 201 million. Of these DKK 2 201 million, DKK 642 million is explicit allowances for VAT fraud connected with underreporting - what the Commission Decision refers to as "evasion without complicity". In such cases, the Danish national accounts add an allowance to value added in the industries in question (including the imputed underreporting) to take account of further underreporting by producers who fraudulently collect VAT and fail to remit it.

After deduction of the above amounts, there was a difference of DKK 4 363 million for 2003. There are several possible reasons for this residual amount:

- 1) larger deductions for bad debts than estimated;
- 2) inaccuracies in estimation of the black economy and underreporting;
- 3) VAT evasion in industries where hidden activity is covered indirectly by a price x quantity calculation;
- 4) implicit correction for VAT evasion in certain sole proprietorships;
- 5) inaccuracies in the national accounts supply and use tables;
- 6) inaccuracies in the national accounts interpretation of VAT legislation.

¹⁷ Part of the difference in 1995 may be explained by difficulties with the conversion into accrual data when Austria, Sweden and Finland joined the EU on 1 January 1995. The change from the rules for VAT on imports from third countries to the general VAT on goods imported from the three countries in question, change the transaction date on which the central government claim arises, from the date of import to the date of sale of the final product. In 1995, Austria, Sweden and Finland together accounted for around 16% of Denmark's imports of goods.

It is important to note that the residual should not be interpreted as meaning that the allowances added in for VAT fraud without complicity are insufficient. The criterion for deciding what should be included in the estimate of GDP is the amounts which the purchasers have actually paid. There are no reasons for claiming that the explicit allowances made for the underreporting of sales in retail trade, restaurants, hairdressers, etc., have been undervalued.

Below, we discuss the above factors individually.

1) As already stated, we cannot rule out the possibility that the deductions for bad debts are larger than the estimated just under 2%, particularly in years when the economy is depressed.

2) There is of course a considerable statistical uncertainty in the estimates of the black economy. It is however most likely that the benchmarks that have been based on surveys of black labour conducted as telephone interviews will tend to undervalue the real value of hidden activity rather than the opposite. Short term movements in the black economy are, however, difficult to assess and the growth rates used to join the benchmarks may not give a correct picture.

3) In a few industries, underreporting and work in the black economy are not covered via explicit allowances but are implicitly included in that the output is estimated as price times quantity. The most important examples are agriculture etc. and the letting of dwellings, but the latter is not liable for VAT, and so it is only agriculture that is relevant here. The black economy in agriculture etc, which is implicitly covered in the national accounts, may help to explain part of the residual.

4) In addition, in industries where there are explicit allowances for the black economy, it may happen that the national accounts *implicitly* capture some of it if, for example, the owners of businesses route some of their private consumption through the business's accounts so that it appears to the tax authorities to be intermediate consumption. This kind of tax swindle must be assumed to occur primarily in small, one-man businesses. The incentive is obvious, since in such cases the owner avoids both income tax and VAT on part of his own private consumption. The SLS-E figures, which are typically used as a basis for the calculations for small enterprises – if not directly, then indirectly through the use of these figures as source for the industrial accounts statistics -, do not cover those which have annual turnover of under DKK 500 000 or those which have not been operating throughout the year. According to the tax legislation, such enterprises do not have to submit the SLS-E form. In the national accounts calculations, these exempt businesses are represented via a grossing up of the accounts of enterprises in the same stratum. To the extent that intermediate consumption is more likely to be overstated in those enterprises for which there is grossing up than in those for which there are accounts available, the national accounts implicitly capture this tax swindle and give an accurate picture of the value added created. It seems likely that this factor is one reason for the residual.

5) Inaccuracies in the national accounts supply and use tables may be another reason for the residual difference. This may happen if, for example, the values for the most important private uses on which VAT is payable, namely household final consumption and the construction of dwellings, are too high, so that the theoretical VAT imputed is too high as well. There is, however, no other indication that the two demand components have been over-estimated.

6) The national accounts supply and use matrices include separate VAT matrices which are thoroughly analysed and balanced every year. When these matrices, which are used as a basis for the calculation of theoretical VAT revenue, are worked out, care is taken to ensure that the

calculation reflects VAT legislation right down to the smallest detail. In doubtful cases, Statistics Denmark has consulted the Ministry of Taxation about the interpretation of special rules in the legislation. But the possibility cannot be ruled out, that subtleties in the VAT legislation have created difficulties for the modelling of the calculation of VAT that is the basis for estimation of the theoretical VAT revenue. However, the special rules in the VAT legislation relating to expenditure on the acquisition, running and maintenance of passenger cars, non-deductibility of accommodation cost, cost in connection with representation and a number of other exceptions from the general rules are as far as possible implemented at the most detailed level in the national accounts.

3.26 Subsidies on products

Tables 3.72 and 3.73 show total subsidies on products and subsidies on products by scheme. Subsidies on products amount to 18.6 bill. DKK and 1.3 percent of GDP in 2003.

Table 3.72 Subsidies on products 2003

DKK million	From general government	From the EU	Subsidies on products, total
Subsidies on products	11 710	6 946	18 656
Percentage of GDP			1.3

Table 3.73 Subsidies on products, 2003, by scheme

Subsidy scheme	DKK million
EU-schemes, total	6 946
Export subsidy schemes	1 795
Net loss on products, connected with intervention	2
Subsidy on the production of skimmed milk, etc.	685
Aid per hectare	4 464
Danish schemes, total	11 710
Municipal housing for pensioners, etc.	15
Refuse disposal and incineration	335
Municipal theatres, orchestras, cinemas, etc.	659
<i>Statsskovvæsenet</i> [Danish Forestry Commission]	64
DSB (<i>De Danske Statsbaner</i>) [Danish State Railways]	6 761
Municipal buses and other transport	1 543
Other subsidies on products to public enterprises	1 134
Central government subsidies to regional theatres	68
Consultants to associations, agriculture	99
Other subsidies on products to private enterprises	1 033
Subsidies on products, total	18 656

Subsidies on products are recorded as required by the ESA 95 paragraph 4.39 on an accrual basis, i.e. when the product transaction which gives rise to the subsidy occurs.

According to ESA 95 paragraph 4.35 c), government subsidies to public corporations to cover their deficits are treated as subsidies on products. For the calculation of subsidies to public corporations such as *De Danske Statsbaner* (DSB), an estimate of the consumption of fixed capital is included, to arrive at the deficit covered by central government. This deficit coverage is not directly observable in central government accounts, since total central government payments to the DSB include both a subsidy (D.31) and an injection of capital into a quasi-corporation (F. 513) to finance capital formation etc. To pick out the subsidy share, therefore, we have to calculate the net operating deficit, i.e. we add depreciation on the capital stock as well as imputed pension contributions of civil servants. The latter also represents a subsidy to public corporations with this type of employees. Whereas there is a certain amount of uncertainty about the estimate of the subsidy as a result of the assumptions made when the consumption of fixed capital and the imputed pension contributions of employees having the status of civil servants are calculated, there is no corresponding uncertainty about GDP/GNI, which depends solely on estimates of the income from tickets etc, about which there is virtually 100% certainty.

4. The income approach

4.0 GDP according to the income approach

For 2003, the calculation of income based GDP can be summarised as in table 4.1 below:

Table 4.1 GDP, income approach, 2003.

	Value, DKK million	% of GDP
Compensation of employees	763 262	54
+ Gross operating surplus and mixed income	436 509	31
+ Taxes on production and imports	243 680	17
- Subsidies	42 761	3
=GDP	1 400 690	100

All components of GDP compiled from the income side (GDP(I)) are compiled at the 130 industry level. In principle, GDP(I) can initially be derived from the target total module, which is based on business accounts. After the balancing of GDP(P) and GDP(E), output and intermediate consumption are replaced by the balanced values (as described in chapter 3), compensation of employees is replaced by values compiled on the basis of the Working time accounts (see section 4.7), and taxes and subsidies are replaced by values from government accounts (see sections 4.8 and 4.9). Hence gross operating surplus and mixed income is compiled as a residual (see section 4.10 and 4.11).

4.1 The reference framework

The main sources used for compiling GDP from the income side are:

- The annual working time accounts (WTA) (compensation of employees)
- The system for compiling fixed capital in the national accounts (consumption of fixed capital)
- Administrative data used for compiling general government (other taxes on production and imports and other subsidies on production)
- Gross operating surplus and mixed income are compiled as residuals.

Below, the main source used for the compilation of compensation of employees in the national accounts, the WTA, is described. The sources used for compiling other taxes on production and imports, other subsidies on production and consumption of fixed capital will be described in sections 4.8, 4.9 and 4.12 respectively.

The WTA is compiled in Statistics Denmark's division for labour market statistics. The WTA is used almost directly and only with a few adjustments made in the national accounts. For a description of these adjustments please see section 4.7.

One of the main purposes of establishing the Working Time Account (WTA) was to compile time series on hours worked. Furthermore, it was also intended to compile data on earnings and employment for the national accounts statistics, adopting the definitions of work, earnings and employment as applied in the national accounts. At the moment, the statistics include data on sex, industry, public/private and socio-economic status (self-employed, assisting spouse or employee).

The system for the Working Time Account is the result of a 3-year project established in Statistics Denmark in 1995 with grants by The European Social Fund. The purpose of the project was to improve the current statistical description of the Danish labour market. The background to the WTA is that there has been a considerable expansion in the number of statistics covering the labour market and the fact that the figures from different statistics are not immediately comparable. The project work was focused on developing statistical systems integrating already existing labour market statistics. The WTA is now published regularly with annual figures once a year and quarterly figures four times a year.

When deciding which data sources to apply when compiling the WTA, attention is centred on the major advantages of the individual statistics. For example, register-based data are used to ensure complete coverage in the calculation of employment and the number of jobs. Information from the wage and salary system of the business enterprises is used to obtain more specific data on the distribution of hours between the individual jobs, and personal interviews are used to obtain data on hours worked for those groups not covered by the data reported by the business enterprises to the Statistics on Earnings.

The 3 main sources used in the annual WTA are:

- 1) The Register of Employment Statistics, which is a totally covering statistic based on administrative information. This register forms the basis for the Register-Based Labour Force Statistics and the Statistics on Employment in Businesses.
- 2) The Annual Statistics on Earnings (Earnings statistics for the private sector, and Earnings statistics for central and local government employees.
- 3) The quarterly Working Time Account.

The WTA uses the *Register of Employment Statistics* for obtaining data on the total number of active jobs over the year, on the number of persons employed at end-November, and on the number of primary and secondary jobs end-November. The Register of Employment Statistics contains information on A-income (income from occupation) for all employees, and thus constitutes the main source for calculating compensation of employees in the WTA. In the Register of Employment Statistics a comprehensive integration of data on individuals from other statistical registers has been conducted. The Register of Employment Statistics also supplies the following data which are used in the WTA: persons in employment who are on labour market leave or maternity leave, reimbursements of sickness and maternity benefits, the statistics on the Danish Labour market Supplementary Pension Scheme (ATP) and pensions that are continuously paid out.

The WTA use the *Annual Statistics on Earnings* in calculating hourly data for each individual job per year. In this context, hours of work performed are of great importance, as these indicate the time worked by an employee in the process of production. On the basis of the Statistics on Earnings, figures on the average annual hours of work performed per job are calculated. In this connection, the number of jobs in the statistical data on earnings is aggregated in the WTA, so that the definition of jobs is similar to that used in the Register of Employment Statistics. From 2000, the hourly data in the Statistics on Earnings has been integrated with the data on level of jobs in the Register of Employment Statistics.

The *quarterly system* is used for calculating annual values. Average employment (and average number of jobs) over the year is estimated as an average figure of average employment during the 4 quarters of the year (respectively average number of jobs of 4 quarters). It is thus the quarterly system, which forms the basis for calculation of average employment and average number of jobs in the annual WTA. The basis for the calculation of average employment and average number of jobs in the WTA is information on the number of persons employed in the Register-based Labour Force Statistics (RAS) and number of primary and secondary jobs in the Statistics on Employment in Businesses (EBS) at the end of November. The development over the year is estimated quarterly by combining structural statistics at the end of November for employees and monthly data reports of A-income (MIA) for employees. For self-employed persons and assisting spouses, the development in jobs is exclusively estimated as an even development from one structural statistic to the next (persons employed in the RAS and number of jobs in the Statistics on Employment in Businesses). However, rolling annual statistics from the Labour Force Survey are applied for projection during the period after the latest structural statistics (i.e. as from the 4th quarter of 2004).

The Working Time Accounts are exclusively based on existing data sources, which are subsequently converted to the concepts used in the WTA. The WTA is flexible in its choice of primary sources, which can be replaced by other sources, if these have proved to be more accurate. The choice of primary source decides the amount of data editing necessary. When it comes to integrating all the sources, however, all the concepts are consistent in conforming to international standards and every variable fulfils the requirement of the system for the WTA.

In the WTA consistent time series on employment, jobs, hours worked and compensation of employees are compiled. The basics statistics used are adapted and adjusted to achieve agreement between the concepts and definitions used. Below these concepts and definitions are described.

Concerning self-employed, assisting spouses and employees respectively, there is an accounting, definitional relation between hours worked, jobs, compensation of employees and number of employed:

The average number of employed consist of the daily average number of persons above the age of 14 who during the year have been paid either as self- employed, assisting spouse or as employee. Persons who are temporarily absent due to leave, but who are connected to a workplace in the form of having a job to return to, are counted as being employed.

1. Employment = number of primary jobs + persons on leave + persons on maternity

The average *numbers of jobs* are calculated as the sum of primary and secondary jobs. Similar to employment the average number of jobs is calculated for every day of the year. Employees who are temporary absent from the labour market are not included in the estimation of jobs. There is the following relationship between the number of jobs and the number of employees:

2. Number of jobs = number of primary jobs + number of secondary jobs

The number of *hours worked* is defined as hours paid by employers, including paid overtime and excluding paid hours of absence. Paid meal breaks are regarded as hours of availability and are included in hours worked. Paid hours of overtime are defined as the number of paid hours that are worked in excess of normal paid hours (i.e. contractual hours) and include extra hours of work for part-time employed without additional overtime pay. It is not possible to obtain detailed data on unpaid overtime hours and undeclared work. Unpaid overtime hours and undeclared work are therefore excluded from the calculation of hours of work performed in the WTA. Unpaid hours have explicitly been excluded, when quarterly statistics from the Labour Force Survey are used in estimating the provisional data on hours for the period, following the most recent structural statistics.

Hours worked include hours paid by employers, which have been carried out by persons aged over 14, including the hours in jobs that are not part of either the persons main employment or the persons largest secondary job.

3. Actual hours worked = average actual hours worked per job \times number of jobs

The number of jobs refers to the total number of active jobs over a year (This concept differs from the published annual average number of jobs in the WTA).

Compensation of employees is calculated in accordance with the definitions in the National Accounts (SNA). Compensation of employees includes total wages and salaries in cash or in kind which the employer pays to an employee for work performed in an accounting period. Compensation of employees also includes employers' actual or calculated social contributions including contribution to pensions. For corrections made to compensation of employees when the WTA is integrated in the national accounts, please see section 4.7.

The compensation of the self-employed and assisting spouses is not included in the WTA. Furthermore, the hourly concept for the self-employed and assisting spouses differs from the hourly concept used for employees, as only hours in the primary job and most important secondary job are included for the self-employed and assisting spouses, and it is also impossible to distinguish between paid, unpaid and undeclared hours of work for these groups. The other variables are calculated in full accordance with the relational accounting equations that have been set up for employees.

An essential feature of these simple relational equations is that they can be used to link the various sources for different variables in the statistics. In this way, hours of work performed are, e.g. extracted from the Statistics of Earnings, whereas the number of jobs are extracted from the Statistics of Employment in Businesses. These identities open up to, in addition to quality checks by

comparing primary sources, the fact that the relational accounting equations lead to new variables supplementing the present statistical resources.

The margins of statistical uncertainty associated with the working time statistics are related to the statistical uncertainty of the individual primary statistical sources that are used. The conceptual consistency and the uniform adaptation of sources over time contribute to a reduction of the margins of statistical uncertainty in the Working Time Account. Especially, the comparison of information from the primary sources in a joint system will reveal, if any, errors, and subsequently errors can be taken into account in the WTA. These errors and inconsistencies are reported back to the primary sources. The work on integrating statistical systems will thus be instrumental in enhancing the general data quality of the primary statistical data.

There is a statistical uncertainty associated with MIA representing the seasonal pattern of employment and not only the seasonal pattern of jobs. MIA represents the number of gross jobs, consequently, if the seasonal pattern in the primary employment differs from the seasonal pattern of the secondary employment the seasonal pattern of employment will be associated with some uncertainty. Furthermore, there may be differences in the seasonal patterns for average employment and average number of jobs compared to the seasonal patterns found in the primary data sources, if there are major differences in the development in the short-term statistics (MIA) over the year and the levels that apply in the 4th quarter of the year from the Register-based Labour Force Statistics and the Statistics on Employment in Businesses. There is also a statistical uncertainty associated with the fact that the structural statistics from the Register-based Labour Force Statistics and the Statistics on Employment in Businesses, which are status observations at the end of November of the year, represent the 4th quarter of the year.

The compilation of Working Time Accounts is based on the idea that the figures are comparable over time to the highest possible degree. The sources will continuously be improved and replaced by other sources if these have proved to be more accurate. New sources will always be adapted to the concepts of the Working Time Accounts System. This implies that adjustments of existing sources cannot immediately be seen as changes of variables and concepts in the Working Time Accounts Statistics, although adjustments of the level of the specific variable may be made according to the new and improved information.

The lack of data comparability between sources is attributable to differences in:

- Compilation methods
- Populations
- Definitions
- Margins of statistical errors
- Time of publication.

A fundamental principle of the Working Time Accounts is to document the coherence between statistics applied in the Working Time Accounts and to document coherence between existing statistics and the Working Time Accounts.

At the international level there is also a high degree of comparability as the Danish Working Time Accounts are worked out according to international guidelines, cf. EUROSTAT 1996: European

System of Accounts (ESA 1995) and International Labour Organisation 1988: Current International Recommendations on Labour Statistics.

4.2 Valuation

Both compensation of employees and gross operating surplus and mixed income are by definition estimated at factor cost. Compensation of employees is recorded according to the accrual principle except for bonuses etc., which are recorded when they are due for payment. Other taxes on production and imports and other subsidies on production are recorded according to the accrual principle. Gross operating surplus and mixed income are based on an estimate of value added at basic prices as calculated in the total module (TM), which is already adjusted to ESA95 concepts. Consumption of fixed capital is estimated as part of the system for compiling fixed capital. Valuation is according to national accounts principles and not company accounts principles, which often use historical cost prices.

4.3 Transition from private accounting and administrative concepts to ESA95 concepts

The main statistical source for the estimate of compensation of employees is the WTA as described in chapter 4.1. Section 4.7 further discusses the transition to national accounts concepts. Table 4.2 shows the result of the transition from primary statistics to the national accounts calculation for compensation of employees.

Table 4.2: Compensation of employees in the WTA and the national accounts, mill. DKK

	2003
Working Time Accounts	741 613
Initial adjustments	-822
Alternative sources replaces WTA	5 295
General government non-market replaces WTA	6 958
Non-declared ("black") wages	1 941
Difference between fringe benefits	
Difference between pension contributions	7 530
Basis for the national accounts	764 158
Other adjustments for consistency	-670
Final national accounts estimate	763 262

As gross operating surplus and mixed income are based on the estimate of value added from the production side, the adjustments made to ensure compliance with ESA95 are described in chapter 3.3

4.4 The roles of direct and indirect estimation methods

All income components other than that part of gross operating surplus for which figures are imputed (surplus on the imputed rental value of owner-occupied housing, consumption of fixed capital relating to non-market output, etc.) are in principle estimated directly as income created by the production process.

4.5 The roles of benchmarks and extrapolations

With the exception of allowances for the hidden economy, income-based GDP is in no case estimated using projections, but is a direct estimate of levels based on total coverage of wages and salaries in the primary statistics.

4.6 The main approaches taken with respect to exhaustiveness

The most important explicit allowances for exhaustiveness related to GDP according to the expenditure approach are fringe benefits and the black economy. For a detailed description please see chapter 7.

4.7 Compensation of employees

Compensation of employees includes all payments in cash and in kind that employers pay their employees for the work done. Compensation of employees consists of wages and salaries on the one side and employers social contributions on the other side.

Wages and salaries come in cash and in kind. Wages in cash consists of regular wages plus i.e. commissions, overtime payments, bonuses, payments on public holidays and payments on other holidays. Social contributions, income taxes etc, which fall on the employee are included even when they in practice are kept back for direct payment to relevant authorities by the employer.

Wages in kind – fringe benefits – consists of products which are provided freely or to reduced price by the employer to the employee as part of the conditions of employment. Fringe benefits are not necessary in the production process. If they were, they should be treated as intermediate consumption.

Employers social contributions consists of the employers payments to secure the employees against social risks and for fulfilments of social needs related to age, disablements and accidents and illness related to work. Employer's social contributions can be actual or imputed. Actual contributions are payments to social and private pension schemes. Imputed contributions are made in cases where there have been no payments of actual contributions, but where the benefits are paid directly by the employer to the employees or former employees. Imputed benefits mainly relate to civil servants.

Table 4.3 shows at the Nace A17 level how compensation of employees is broken down by wages and salaries in cash, wages and salaries in kind (fringe benefits), employer's actual social contributions and employers imputed social contributions.

Table 4.3: Compensation of employees 2003, mill. DKK

Nace	Text	Wages and salaries in cash	Wages and salaries in kind	Employers actual contributions	Employers imputed contributions	Compensation of employees
A	Agriculture, hunting and forestry	6 963	80	343	15	7 401
B	Fishing	833	8	40	0	880
C	Mining and quarrying	1 114	42	95	0	1 250
D	Manufacturing	116 431	2 160	8 532	0	127 123
E	Electricity, gas and water supply	4 435	76	359	0	4 871
F	Construction	43 380	460	3 033	108	46 980
G	Trade and repair services	94 958	2 354	5 801	0	103 113
H	Hotels and restaurants	11 887	127	515	0	12 529
I	Transport, storage and communication	50 423	897	3 358	12	54 690
J	Financial intermediation	32 066	503	3 489	0	36 058
K	Real estate, renting and business activities	78 705	1 423	5 542	180	85 849
L	Public adm. and defense, compuls. soc. secu.	60 418	363	2 858	3 172	66 810
M	Education	55 883	287	3 410	3 002	62 583
N	Health and social work	104 059	555	9 800	5 452	119 866
O	Other community, social and personal service activities	28 920	311	1 844	377	31 451
P	Private households with employed persons	1 779	0	29	0	1 807
Q	Treatment of extra territorial organisations and bodies					
Total		692 253	9 645	49 045	12 319	763 262

Compensation of employees is mainly based on the annual Working Time Accounts (WTA) as described in chapter 4.1. The WTA uses the Register of Employment Statistics and generally the national accounts uses this source directly.

The Register of Employment Statistics includes taxable income from the occupation (A-indkomst). In addition, contributions to capital pensions administered by the employer are included. Contributions by employer or employee to other pension schemes are not included.

In addition, the WTA includes contributions to industrial injury insurance, fringe benefits, anniversary bonuses, ATP (obligatory defined contribution scheme), pension schemes with current payments, civil servant pensions and deduction for reimbursements of maternity- and sickness benefits.

The national accounts then makes the following additional adjustments to the WTA in order to get to the national accounts version of compensation of employees:

- Alternative sources
- Non-declared wages (“black wages”)
- Pension contributions
- Other corrections

For certain industries, compensation of employees from the WTA is replaced by *alternative sources*. For example this is done for the financial sector and also for industries partly or fully covered by general government non-market activity.

In order to obtain the national accounts concept for compensation of employees, non-declared or “black wages” are also included.

Pension contributions from the WTA are replaced by pension contributions compiled in the national accounts as part of the compilation for pension funds (only contributions to private pension schemes).

Finally, occasional adjustments between industries are made when considering the consistency between output, value added and compensation of employees.

The national accounts includes fringe benefits via the WTA. Fringe benefits included are those that, based on available sources, are considered important measured by their market value. This includes i.e. the market value of free cars, canteen subsidies, free telephone and free computers.

When comparing compensation of employees in the national accounts with compensation of employees in the register based statistics (and also employment and hours worked) for specific industries, it is important to be aware of the fact that the national accounts uses *activity defined industries* for trade, agriculture, construction and auto repair. This means that all production, value added etc. and also compensation of employees and employment consequently are transferred to these industries. The transfers are based on accounting and product statistics.

Table 4.4 shows at the aggregate level the relation between compensation of employees in the WTA and the national accounts.

Table 4.4: Compensation of employees in the WTA and the national accounts, mill. DKK

	2003
Working Time Accounts	741 613
Initial adjustments	-822
Alternative sources replaces WTA	5 295
General government non-market replaces WTA	6 958
Non-declared (“black”) wages	1 941
Difference between fringe benefits	
Difference between pension contributions	7 530
Basis for the national accounts	764 158
Other adjustments for consistency	-670
Final national accounts estimate	763 262

The employment figures in the Danish national accounts comprises number of persons employed and number of hours worked. Both the number of employed persons and number of hours worked are - like compensation of employees - based on the WTA.

The employment concept used is the domestic concept, i.e. persons employed by domestic producers. Because the WTA does not use the domestic concept, a correction is made to adjust for foreigners employed in domestic companies and foreign seamen employed on Danish ships. In addition, a correction is made for “black labour”.

The number of employed persons (employees and self-employed) includes persons on maternity leave and other forms of labour market leave as defined in ESA95. The number of hours worked is compiled as the number of hours *actually* worked. This is done using the number of hours worked per employee and self-employed respectively in the WTA multiplied by number of employed persons in the national accounts at the 130 industry level.

Tables 4.5 and 4.6 shows the relation between employment and hours worked in the WTA and the national accounts. *Other adjustments* are national accounts adjustments related to the economic part of the national accounts and correspond to adjustments made to compensation of employees.

Table 4.5: Employment in the WTA and the national accounts, 1000 persons

	2003
Working Time Accounts	2 685
Initial adjustments	2
Alternative sources	-1
Non-declared (“black”) wages and domestic concept	48
Other adjustments	19
Final national accounts estimate	2 748

Table 4.6: Hours worked in the WTA and the national accounts, mill. hours worked

	2003
Working Time Accounts	4 194
Initial adjustments	-2
Alternative sources	-5
Non-declared (“black”) wages and domestic concept	51
Other adjustments	29
Final national accounts estimate	4 266

4.8 Other taxes on production and imports

Table 4.7 summarises other taxes on production in the national accounts for 2003.

Table 4.7 Other taxes on production, 2003

Type of tax	DKK million
Employer contributions to <i>Arbejdsgivernes Elevrefusion</i> (AER)	2 898
Road fund licence on vehicles used in production	2 218
Property taxes	16 510
Payroll taxes	3 631
Taxes linked with checking, supervision, licences, etc.	145
Other taxes on production, total	25 401

It shows that there are only a few types of tax which are classified as other taxes on production. The AER contribution, which finances apprenticeships and traineeships, does not give the individual employer or employee any rights and is therefore a tax and not, for example, a contribution to social security schemes. The share of total road fund licenses which relates to vehicles used in production is calculated from a breakdown by owner of the total number of vehicles registered. In the national accounts, road fund licences on consumers' vehicles are "direct taxes", i.e. taxes on income and wealth etc. Obviously, property taxes are not linked to products. Payroll taxes are, as their name indicates, a tax on the wages and salaries paid by financial institutions, to offset the fact that most financial services are exempt from VAT. It can be seen that only taxes for checking etc. amounting to DKK 145 million are counted as taxes under paragraph 4.23 e) in the ESA 95. All other payments by producers in connection with government checks and licences are considered to be purchases of services.

Taxes on *checking and supervision* comprise the:

- tax on payment cards;
- tax to *Arbejds miljøfonden* [Work Environment Fund].

Taxes connected with *licences* include:

- tax on pharmacies;
- taxes under the cultural fund, and the
- tax for the operation of the school ship "*Danmark*".

All the above taxes are clearly other taxes on production. There is no borderline case of any importance in quantity terms. All the taxes are purely national and not EU schemes. The total tax revenue is assigned to the domestic general government sector.

4.9 Other subsidies on production

Subsidies on production which are not linked to products come under both EU and national schemes. Table 4.8 summarises these other subsidies:

Table 4.8 Other subsidies on production, 2003.

Type of subsidy	DKK million
Total EU schemes	2 358
Interest rate subsidies	159
Aid per hectare and set-aside	554
Other EU schemes	1 645
Danish schemes, total	21 747
Subsidies to pharmacies	62
Interest subsidies and contributions, housing	5 668
Municipal subsidies to private sports halls	354
Municipal subsidies to theatres, orchestras, cinemas, etc.	556
Central government subsidies to regional orchestras	90
<i>Danmarks Erhvervsfond</i> [Trade and Industry Fund], export-promoting arrangements	42
Subsidies for product development	225
<i>Arbejdsgivernes Elevrefusion</i> (AER)	2 074
Compensation for employers' contributions to the ATP	134
Municipal grants for the employment of the unemployed	123
Expenditure under the County Land Tax Act	259
Central government subsidies to private railways	1
Municipal subsidies for the running of buses and other transport activities	995
Home helps	221
Other subsidies on production to private enterprises	10 944
Other subsidies on production, total	24 105

The subsidy known as "*Arbejdsgivernes Elevrefusion*" is the counterpart to the other tax on production known as the AER, which was shown in Table 104. All employers contribute to a pool which finances apprenticeship and trainee places in connection with vocational training. Those employers who employ apprentices and trainees receive a subsidy from the pool.

4.10 Gross operating surplus

The income component "gross operating surplus and mixed income" is based on business accounts and the sources and methods are the same as for the output-based estimate. For further details, therefore, reference should be made to Chapter 3, in particular sections 3.1.2, 3.2 and 3.3.

The initial estimate for gross operating surplus and mixed income is derived from the functional target total module as follows:

Output (1015) – intermediate consumption (2010) – other taxes on production (3110) + other subsidies on production (3210) – compensation of employees (4010).

The periodisation of the accounting statistics used for the functional target total module was described in Section 3.1.2.3.6

The final balanced value of gross operating surplus and mixed income is obtained when the initial estimates based on accounting statistics are replaced by other information:

Output (1015) and intermediate consumption (2010) are replaced by the corresponding figures in the balanced supply and use tables

Other taxes and subsidies on production are replaced by final estimates based on information from general government (see sections 4.8 and 4.9)

Compensation of employees is replaced by the values based on the WTA as described in section 4.7

4.11 Mixed income

There is no split of “gross operating surplus and mixed income” into the parts “gross operating surplus” and “mixed income”. Mixed income is part of “gross operating surplus and mixed income” as described in section 4.10.

4.12 Consumption of fixed capital

In general, the estimate of the consumption of fixed capital (CFC) is not relevant to GDP or GNI, since these concepts are, of course, *gross*, i.e. production or income aggregates before deduction of the fixed capital consumed.

There is, however, one very important exception to this main rule, namely non-market activity, where by convention output is calculated from the costs point of view, and where the consumption of fixed capital is one of the components of costs. Non-market activity occurs in Sector S.13, general government and Sector S.15, non-profit institutions serving households. The latter is private non-market output. The vast majority of non-market output comes from government.

As regards the minor share of output from non-market units in S.15, the consumption of fixed capital is, as stated in Section 3.1.2.4.3, calculated at 49.4% of total wages and salaries. This percentage is based on an estimate of capital stock in the sector carried out in 1995, where the latest final figures referred to 1992. This capital stock estimate consisted of a mixture of direct estimates of stocks and PIM (perpetual inventory method) calculations. Since the link between the consumption of fixed capital and total wages and salaries may be assumed to be relatively stable in this field, it was decided to project the 1992 total wages and salaries benchmark in the current calculations of this relatively modest amount.

The description below therefore refers solely to the consumption of fixed capital in S.13, general government.

In order to make the compilation of the annual national account smoother, it has been decided that the final estimates for consumption of fixed capital for general government should be compiled one year in advance compared with other final figures. Since input to the compilation is not yet final at the compilation time, provisional data sources are used in the estimation. This implies that final figures for CFC are estimated by using provisional data for gross fixed capital formation. The experience has shown that the CFC estimation based on the provisional data sources do not vary significantly to the corresponding the GFCF figures based on final data sources.

General government capital stock consists of buildings, structures such as roads, bridges etc., machinery, transport equipment and intangible fixed assets, which for this sector is in practice software. Buildings constitute by far the largest share of government capital stock and capital formation. For 1993 and onwards, the consumption of fixed capital was obtained - as required by the ESA 95 - via an estimate of the gross stock of the individual types of capital and use of the straight line depreciation method. Whereas the ESA 95 is to a certain extent flexible, the ESA 79 demanded the linear method. One important strong point in Denmark's estimate is that for buildings and transport equipment the calculations are based on a *direct estimate of stocks* which in turn was based on register information for a benchmark year - in this case 1995 - for buildings, and every year for transport equipment. In contrast to PIM calculations, there is therefore absolutely no uncertainty as to how many square metres of buildings there actually were in S.13 in 1995. The only uncertainty concerns their lifetimes. For buildings, the PIM was used to project the 1995 benchmark back to 1966 and forward.

Table 4.9 shows the methods used for each type of capital formation:

Table 4.9 Methods for estimating capital stock in S.13

Type	Method	Survival curve	Assumed average lifetime	Number of products
Machinery	PIM 1947 →	Winfrey S3	Varying	Approx. 350
Transport equip.	Direct estimate of stocks	Not relevant	Varying – 15 years for cars	6
Buildings	Direct estimate of stocks for 1995		Constructed 1960 onwards, 65 years Constructed prior to 1960, gradually increasing lifetimes back in time	2
Roads and bridges	PIM 1850 →	Winfrey L3	50 years	1
Software	PIM		4-6 years	2

The GNI Committee's task force on consumption on fixed capital on roads, bridges etc. has made some recommendations on this subject. In the following, the Committee's recommendations and Statistics Denmark's practise are described:

- Recommendation 1: Proper distinction between market and non-market GFCF in PIM.
 - Statistics Denmark make a separate PIM-estimation for the general government sector, GFCF are not mixed in the estimations. CFC compiled by using *direct estimate of stocks* are based on register data which are match with information on institutional sector, which insure a proper distinction between sectors.
- Recommendation 2: Proper distinction of GFCF between activities.
 - This question is addressed in section 5.10 (and 5.11).
- Recommendation 3: Separate GFCF on roads.
 - Statistics Denmark has a separate time series for GFCF on roads.
- Recommendation 4: Consistency of GFCF time series, also for the early years.
 - During the introduction of ESA95 in the Danish national account, a separate time series for gross fixed capital formation and consumption of fixed capital on roads was estimated. This insures a consistent time series for roads. Statistics Denmark publishes figures for capital stock and consumption of fixed capital back to 1966.
- Recommendation 5: Distinguish the main components of infrastructure assets (roads).
 - Statistics Denmark does not have detailed information on the components of roads. In the PIM-estimation on CFC on roads, only a single product is used in the estimation.
- Recommendation 6: Lifetime assumptions should be investigated at least every 5 to 10 years.
 - About 4 years ago Statistics Denmark has for a period of years compared the development in the gross stock on roads and the size of total road network. This investigation has resulted in an increase in the service life for roads from 40 years to 50 years because the size of the total road network was increasing and but the gross stock was declining.
- Recommendation 7: A bell-shaped retirement function should be used.
 - Statistics Denmark uses a bell-shaped Winfrey L3 retirement function for roads.

Data revision of the national accounts, capital stocks and s.13

The Danish national accounts was subject to a data revision in 2004-2005. This revision included a change of base-year, which is particularly important for capital stock estimations, since capital stock estimations have it's heaviness in constant prices. However, no methods used were changed.

Since consumption of fixed capital for the general government is an input into the estimation of government output, it was decided – in order the make the compiling of the revised national account smoother – to determine the level of consumption of fixed capital in the start of the revision process. This implies that no new information could be taking into account, only knowledge already available. Further, it was decided that the level of consumption of fixed capital should be

unchanged before 1993 but not afterwards. Later in the process, some small changes were made for the years 1990-1992 as well.

Estimation of CFC for the period 1971 to 1998 was before the revision based on a simplified method. From 1999 and onwards the estimation is based on the described method. The changes for 1999 and onwards can be attributed to the compiling procedure which require estimation of CFC one year in advance. Table 4.10 shows consumption of fixed capital before and after the major revision.

Table 4.10: Consumption of fixed capital in General Government before and after data revision in 2005

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Before revision	19.864	20.839	21.887	22.777	24.513	24.705	25.279	25.797	25.940	25.301	25.598	26.293	26.706	...
After revision	19.852	20.825	21.873	21.392	22.195	21.861	22.519	23.915	24.524	24.620	25.284	25.566	26.398	26.707
Revision	-12	-14	-14	-1.385	-2.318	-2.844	-2.760	-1.882	-1.416	-681	-314	-727	-308	...

5. The expenditure approach

5.0 GDP according to the expenditure approach

For 2003, the calculation of expenditure-based GDP can be summarised as in table 5.1 below:

Table 5.1 GDP, expenditure approach, 2003

	Value, DKK million	% of GDP
Total final consumption expenditure	1 038 178	74
Household final consumption expenditure	656 340	47
NPISH final consumption expenditure	10 602	1
General government final consump. expenditure	371 236	27
Gross capital formation	274 962	20
Gross fixed capital formation	269 835	19
Changes in inventories	3 210	-
Acquisitions less disposals of valuables	1 917	-
Exports of goods and services	635 114	45
Imports of goods and services	547 565	39
GDP	1 400 689	

The table shows that household final consumption expenditure in Denmark made up a little less than half of GDP in 2003, general government final consumption expenditure a good quarter, gross capital formation one-fifth and net exports the final 6%. Exports of goods and services accounted for 45% and imports 39%.

5.1 The reference framework

The most important sources for the estimate of the components of expenditure-based GDP are the following:

Household final consumption expenditure:

Retail trade statistics, DOI (level of retailable consumption)

The FU [household budget survey] (structure of retailable consumption, services)

VAT statistics

Surveys of housing rentals

Housing surveys (housing stock, stratified)

Energy statistics (electricity, gas, district heating)

Statistics on financial institutions (financial services)

Statistics on public finances (user payments to public institutions)

Tax statistics (quantities of goods on which excise duties are levied)

Supply side estimates
Motor vehicle statistics (households' acquisitions of new cars)
Balance of payments statistics (tourist revenue and expenditure)

Final consumption expenditure in NPISHs:

ERE [establishment-related employment statistics] estimates of total wages and salaries

Gross fixed capital formation:

Agricultural statistics
Public finance statistics
Accounts statistics for industries predominated by public corporations
Register of buildings and dwellings (BBR)
Index of construction costs
Product statistics for the IT industries
ICT expenditure
External trade statistics
Industrial accounts statistics
Specific industry statistics
Media statistics
Register of motor vehicles
Register of vessels
Register of aircrafts

Acquisitions less disposals of valuables:

Industrial commodity statistics
External trade statistics
Household budget survey (FU)

Changes in inventories:

Industrial accounts statistics
SLS-E statistics
Accounting statistics for industries where public corporations predominate
Specific industry statistics, including agricultural statistics
Energy statistics
Agricultural statistics

Imports and exports of goods and services:

External trade statistics (Intrastat and Extrastat)
Balance of payments statistics
Settlements statistics from the *Nationalbank*
VAT statistics
Accounts statistics for sea water transport.

For some consumption groups of household final consumption expenditure, more than one source is available. In these cases, an assessment of which source is the most reliable for estimating the variable (consumption group) has been made. The assessment mainly relates to whether the consumer survey (FU) should be replaced by another source.

It is widely known that information in consumer surveys is surrounded by a good deal of uncertainty when it comes to items based on households' own accounting, i.e. in general small items of expenditure, as opposed to those items where an interviewer notes expenditure as evidenced by supporting documents, which are typically the larger items. When the survey is processed, everything possible is done to eliminate any bias resulting from differential non-response. However, it must be admitted, that there is a good deal of uncertainty surrounding the figures which households themselves have recorded.

Against this background, the main rule in the Danish national accounts has been that wherever possible the FU has been replaced by other information to *determine levels*, but it is widely used to determine the structure of expenditure – for the breakdown of food consumption into individual foodstuffs, for example. In various important cases, the FU is the only available source, but in the vast majority of such cases the items concerned are consumption items where, firstly, an interviewer has recorded expenditure from the household's supporting documents and, secondly, the expenditure concerned is common to virtually all households. These two circumstances are characteristic of those items in the survey which can be determined with a good deal of certainty. The fact that an interviewer has seen the supporting documents – telephone bills, for example – rules out the risk of items being forgotten, and the fact that this is general, recurrent expenditure for almost all households means that the sampling uncertainty for the items in question is relatively low. In these cases, FU figures are quite justifiably used to determine levels in the national accounts.

For retailable consumption, i.e. that share of private final consumption which passes through retail trade, the FU figures are replaced by retail sales figures which must be considered a much better statistical source for determining levels of private consumption. But this source is not sufficiently detailed to enable it to be used as the basis for the breakdown of expenditure into the national accounts consumption groups. The FU figures are therefore used to divide the aggregate groups from retail sales statistics into the detailed consumption groups. For this breakdown, the FU figures for the consumption of alcohol and tobacco etc. are replaced by figures based on tax/duty-adjusted quantities. For these expenditure items, the FU figures are known to be very much underestimated.

For energy products and acquisitions of motor vehicles, there is special information available based on physical data. In these cases, the FU figures are replaced either when the initial estimates of private consumption of the expenditure components in question are made, or later during the balancing process. The FU figures for the consumption of hotel and restaurant services are also known to be seriously underestimated. For these groups, the initial household consumption estimate is therefore based on supply, i.e. sales in hotels and restaurants, the starting point being that share of the supply which was allocated to household consumption in the most recent final national accounts. A detailed description of sources and methods underlying the initial estimates for the individual consumption groups can be found in Section 5.7.

5.2 Valuation

When the final demand components are estimated directly from the point of view of the purchaser, the observed value level is purchasers' prices including non-refundable VAT, as required by the ESA 95. In these cases, there is no need to process primary data to obtain value levels. In all other cases, for example when a final demand component is estimated from the supply side, it is ensured

that proper trade margins, product taxes and -subsidies and VAT are included. This is typically done as part of setting up product balances.

5.3 Transition from private accounting and administrative concepts to ESA95 concepts

In household and business accounts, purchases of goods and services are recorded in terms of purchasers' prices including non-refundable VAT. Refundable VAT is not included in the acquisition prices, on which information is available, which is consistent with the ESA 95 net VAT system.

Various acquisitions which the national accounts treat as gross fixed capital formation are included in business accounts as current operating expenditure in the form of intermediation consumption or wages and salaries which are not capitalised. Examples would be consumables as well as purchased and own-produced software. The corrections which have to be made to bring business accounts into line with national accounts concepts were described in Chapter 3 as part of the description of the output-based estimate of GDP. The corrections on the expenditure side are a mirror image of the corrections to output value (e.g. own-produced software) and intermediate consumption (consumables and purchased software) in the output-based estimate. The logical corrections to the output, expenditure and income sides are made simultaneously for the intermediate system, as described in chapter 3.

For import and export of services, the statistical challenge arising from the use of settlements statistics for the estimate of *aggregate* exports/imports of services lies in ensuring that the definition of what constitutes an export or an import of services remains consistent with the external trade statistics and national accounts estimates of exports of goods f.o.b. and imports of goods c.i.f. Since the payments in the settlements statistics are coded as goods or services depending on whether transport and insurance services are invoiced separately or not, the settlements statistics' delimitation of external trade in goods/services will not tally with the national accounts' definitions. When settlements statistics are used for national accounts, therefore, a correction is made to exports and imports of services as estimated in the settlements statistics to bring the latter into line with the estimate of exports of goods f.o.b. and imports of goods c.i.f. For a more detailed description, please see section 5.16.

5.4 The roles of direct and indirect estimation methods

By far the largest share of expenditure-based GDP is calculated using a direct estimate. The most important exceptions are household consumption of hotel and restaurant services, dwelling services, consumption in NPISH, which are all calculated indirectly from the supply side.

Other than for those areas of the economy (general government, owner-occupied dwellings, NPISH), where the output- and expenditure-based calculations cannot by definition be independent, GDP from the production side and GDP from the expenditure side are largely independent of one another prior to balancing.

Acquisitions less disposables can in principle be estimated in two ways, either directly using information on the expenditure (uses) side (purchaser's side) or indirectly on the basis of supplies of products to the domestic market, using estimated shares of supplies to the final demand components to calculate final uses from the resources side.

In the Danish national accounts, the initial estimates for the final demand components are compiled as direct estimates from the expenditure side.

Since the Danish national accounts are adjusted in a detailed product balance system, there is a systematic confrontation in connection with the balancing. One of the strongest cross-checks for the compilation of national accounts consists in comparing information from purchasers on their acquisitions less disposals of the individual products or groups of products with information on the sellers' side on supplies to the domestic market.

5.5 The roles of benchmarks and extrapolations

By far the largest share of expenditure-based GDP is calculated directly in terms of levels. The most important exception is the consumption of dwelling services (actual and imputed rentals) where levels are calculated every 4-5 years, in line with the periodicity in the virtually exhaustive surveys of household rents, and a projection using price and quantity indicators in the period between two benchmarks. Another important exception relates to allowances for the hidden economy, which are based on a calculation of levels for the year 2004 and then generally projected forwards using relevant indicators and backwards using the old series.

5.6 The main approaches taken with respect to exhaustiveness

As regards the legitimate (as opposed to the black) economy excluding fringe benefits, the most important steps taken are corrections and supplements to the sources underlying the calculations of household consumption expenditure. Retail sales statistics do not cover all industries of retail trade. In the national accounts calculations, these statistics are therefore supplemented by VAT statistics to ensure that the whole of retail trade is covered, as described in section 5.7.

The calculations of fringe benefits and the black economy are discussed in chapter 7.

5.7 Household final consumption expenditure

5.7.1 Statistical sources

Various sources are used to provide information on household final consumption expenditure. The two most important are:

- The retail sales index [Danish abbreviation DOI], which contains information on levels of sales to private individuals, and
- The household budget survey [Danish abbreviation FU].

Although the first of these sources is officially referred to as the "retail turnover index" (DOI), it is in fact a monthly estimate of the level of retail turnover. To calculate the index, turnover in the sample is grossed up to cover the total population of retail trade enterprises. The national accounts uses the DOI levels for compiling household consumption expenditure.

The DOI breaks down retail sales into three categories, namely

- sales to private individuals;
- sales to (market producer) enterprises;
- sales to (non-market) public institutions.

This breakdown is important, since only sales to private individuals are relevant to the estimate of household final consumption expenditure. If the only sales known were total sales in retail enterprises, the calculation would be less reliable. The minor share of sales reported as being to private individuals, but which are actually to sole proprietorships, and should therefore not be included are assumed for practical purposes to offset the minor share of sales from manufacturing and wholesale enterprises to private individuals, which also should be included in the estimate of household final consumption expenditure.

The main idea behind the calculation system is a breakdown of household consumption expenditure into groups by purpose/product, each group being calculated on the basis of the most reliable of the available sources, but in a way which seeks to make optimum use of all available information. The basic breakdown of household consumption expenditure is into retailable and non-retailable consumption expenditure. The former is the share of final consumption expenditure of goods, which involves retail trade. In this context, retail trade excludes motor vehicles etc. and energy goods, which are not covered by the DOI.

Sales to private individuals as taken from the DOI are normally considered the best source of information on household final consumption expenditure. In particular, this source is not subject to the same sampling uncertainty and problems with the treatment of tourist expenditure and other possible skewness as the FU. It should be stressed here that the DOI sample coverage is up to around 87% of basic turnover in the population, so sampling uncertainty is rather low. Since January 2002, the sample has been renewed by approximately 1/3 every year. The breakdown of goods in DOI is not very detailed. DOI breaks down sales into three main groups of goods:

1. food, beverages and tobacco and convenience goods (FD);
2. clothing etc. (B);
3. other consumer goods (A)

For the national accounts, target totals have to be worked out at a much more detailed level. The next stage is therefore to use the FU to split the main groups of goods into subgroups. The view taken here is that the FU is essentially more reliable as a distribution key than as an estimate of levels. There are exceptions, however, where the FU is known to give a misleading picture of consumption expenditure.

For non-retailable consumption, i.e. other goods and all services, the preferred source is in general the FU with a number of corrections. In cases where the FU is known to cause problems, supply statistics are used, i.e. supplies of certain product balances and the commodity flow method or,

alternatively, the balanced consumption group as in the early versions of the provisional national accounts.

The detailed calculations of household consumption expenditure as described in this section are already made for the provisional accounts for 2003, year t, calculated in year t+2 (the final accounts are calculated in year t+3), because sources are available at this early stage. The target totals compiled in year t+2 are then part of the balancing of the provisional accounts. These balanced values from the provisional accounts are then used as target totals in the final accounts. The remaining part of section 5.7 describes the calculation for the provisional accounts calculated in year t+2.

Table 5.2 shows the sources for the calculation of the initial estimates for each of the 72 consumption groups in the national accounts' most detailed consumption grouping. The following abbreviations are used:

- DOI: Retail turnover index.
 FU: Uncorrected household budget survey
 FU corr: Household budget survey with certain - in most cases conceptual – corrections
 FU + product: Household budget survey plus a product balance
 Supply: supply-side estimates using the commodity flow method
 FNR: Balanced values from the latest provisional national accounts, in this case calculated in year t+1
 BB: Balance of payments statistics
 FD: Food, beverages and tobacco and convenience goods in the DOI
 B: Clothing and footwear in the DOI
 A: Other groups of goods in the index
 Energy: The energy sub-system which compiles supply and use of energy products.
 Telephone: Telephone interviews

Table 5.2 Statistical sources for the national accounts estimates of household final consumption expenditure

COICOP- Consumption group	Source	Retailable/ non- retailable	Group of goods in DOI	Value in DKK million
72-grouping		consumption		
1110 Bread and cereals	DOI	Retail	FD	11 083
1120 Meat	DOI	Retail	FD	17 245
1130 Fish	DOI	Retail	FD	2 992
1141 Eggs	DOI	Retail	FD	1 119
1142 Milk, cream, yoghurt etc.	DOI	Retail	FD	5 892
1143 Cheese	DOI	Retail	FD	3 935
1150 Butter, oils and fats	DOI	Retail	FD	2 176
1160 Fruit and vegetables except potatoes	DOI	Retail	FD	10 017
1171 Potatoes etc.	DOI	Retail	FD	1 539
1181 Sugar	DOI	Retail	FD	436
1182 Ice-cream, chocolate, etc.	FNR	Retail	FD	10 032
1190 Food products n.e.c.	DOI	Retail	FD	3 059

1210	Coffee, tea and cocoa	DOI	Retail	FD	2 570
1220	Mineral waters, soft drinks and juices	FNR	Retail	FD	6 490
2110	Wine and spirits	FNR	Retail	FD	8 331
2130	Beer	FNR	Retail	FD	5 349
2210	Tobacco	FNR	Retail	FD	14 284
3110	Garments and clothing materials etc.	DOI	Retail	B	26 368
3140	Laundry, dry cleaning etc.	FU-corr.	Non-retail		547
3200	Footwear	DOI	Retail	B	5 666
4100	Housing	Supply	Non-retail		39 937
4200	Imputed rentals for housing	Supply	Non-retail		81 117
4300	Regular maintenance and repair of the dwelling	FU	Non-retail		5 269
4410	Refuse collection etc.	FU	Non-retail		3 906
4430	Water supply and sewage services	Energy	Non-retail		8 712
4510	Electricity	Energy	Non-retail		16 816
4520	Gas	Energy	Non-retail		4 663
4530	Liquid fuels	Energy	Non-retail		3 929
4540	Hot water, steam etc.	Energy	Non-retail		15 533
5100	Furniture, furnishings, carpets etc.	DOI	Retail	A	14 727
5200	Household textiles	DOI	Retail	A	3 130
5310	Major household appliances	DOI	Retail	A	5 782
5330	Repair of major household appliances	FU	Non-retail		676
5400	Glass, tableware and household utensils	DOI	Retail	A	4 203
5500	Tools and equipment for house and garden	DOI	Retail	A	3 423
5610	Non-durable household goods	DOI	Retail	FD	3 471
5620	Domestic services and home care services	FU	Non-retail		2 782
6111	Medical and pharmaceutical products	DOI	Retail	A	5 208
6112	Therapeutic appliances and equipment	DOI	Retail	A	2 823
6200	Out-patient services	FU corr.	Non-retail		7 097
6300	Hospital services	Supply	Non-retail		2 167
7100	Purchase of vehicles	FNR	Non-retail		24 451
7210	Repair and mainten. of motor vehicles	FU corr.	Non-retail		15 263
7220	Fuels and lubricants	Energy.	Non-retail		17 878
7240	Other serv. related to personal transport	FU corr.	Non-retail		7 021
7300	Transport services	FU corr.	Non-retail		7 683
8100	Communications	FU corr.	Non-retail		13 728
9110	Radio and television sets etc.	DOI	Retail	A	4 962
9120	Photographic equipment etc.	DOI	Retail	A	1 178
9130	Data processing equipment	DOI	Retail	A	6 996
9140	Recording media for pictures and sound	DOI	Retail	A	2 996
9150	Repair of a/v and computer	FU	Non-retail		898
9200	Other major durables for recreation and culture	DOI	Retail	A	2 801
9300	Other recreational items and equipment	DOI	Retail	A	14 455
9400	Recreational and cultural services	FU corr.	Non-retail		23 381
9510	Books, newspapers and periodicals	DOI	Retail	A	9 248
9530	Stationery and drawing materials etc.	DOI	Retail	A	1 414
9600	Package holidays	Teleph.	Non-retail		5 716
9700	Education	Supply	Non-retail		5 157
9810	Catering	FNR	Non-retail		28 696

9820	Accommodation services	FNR	Non-retail		3 164
9911	Hairdressing salons etc.	FU corr.	Non-retail		5 399
9912	Articles and products for personal care	DOI	Retail	FD	8 311
9921	Jewellery, clocks and watches	DOI	Retail	A	1 746
9922	Other personal effects	DOI	Retail	A	2 744
9931	Retirement homes, day-care centres etc.	Supply	Non-retail		3 601
9932	Kindergartens, crèches etc.	Supply	Non-retail		9 788
9940	Insurance	Supply	Non-retail		16 393
9950	Financial services n.e.c.	Supply	Non-retail		32 327
9960	Other services n.e.c.	FU+product	Non-retail		4 477
9980	Consumption. of non-residents on the economic territory	BB	Non-retail		-35 316
9990	Consumption of residents in the ROW	BB	Non-retail		35 286
Total household consumption expenditure					656 340

5.7.2 Methods of calculation

The DOI value level is purchasers' prices including VAT, i.e. the value relevant to household final consumption expenditure. Also the FU values are including VAT. Consequently, no valuation correction is needed.

When describing the calculations, it is useful to make a breakdown into a number of steps:

Step 1: Link between the three main groups in DOI and the national accounts consumption groups

It is necessary to create a link between the three main groups from the DOI and the national accounts consumption groups. The following links were adopted between the national accounts consumption groups defined by purpose - c.f. Section 10.3 - and the DOI main groups of goods:

FD: Food, beverages and tobacco, convenience goods:

1110	Bread and cereals
1120	Meat
1130	Fish
1141	Eggs
1142	Milk, cream, yoghurt etc.
1143	Cheese
1150	Butter, oils and fats
1160	Fruit and vegetables except fruit
1171	Potatoes etc.
1181	Sugar
1182	Ice-cream, chocolate etc.
1190	Food products n.e.c.
1210	Coffee, tea and cocoa
1220	Mineral waters, soft drinks and juices

2110	Wine and spirits
2130	Beer
2210	Tobacco
5610	Non-durable household goods
9912	Articles and products for personal care

B: Clothing

3110	Garments and clothing materials etc.
3200	Footwear

A: Other consumer goods

5100	Furniture, furnishings, carpets etc.
5200	Household textiles
5310	Major household appliances
5400	Glass, tableware and household utensils
5500	Tools and equipment for house and garden
6111	Medical and pharmaceutical products
6112	Therapeutic appliances and equipment
9110	Radio and television sets etc.
9120	Photographic equipment etc.
9130	Data processing equipment
9140	Recording media for pictures and sound
9200	Other major durables for recreation and culture
9300	Other recreational items and equipment
9510	Books, newspapers and periodicals
9530	Stationery and drawing materials etc.
9921	Jewellery, clocks and watches
9922	Other personal effects

Step 2: Adding retail trade industries not covered by DOI and deducting goods used as input in construction

The DOI does not cover all retail trade industries (outside the motor vehicle group and energy). As a first step, the missing DK-NACE retail trade industries are identified and their VAT sales are used instead. VAT sales multiplied by one plus the VAT rate is as a general rule assumed to be equivalent to DOI sales to private consumers. The following detailed NACE industries are used:

523200	Retail sale of medical and orthopaedic goods
524450	Retail sale of articles for lighting
524540	Retail sale of musical instruments
524620	Retail sale of building materials
524630	Retail sale of paint and wall paper
524835	Art shops and galleries
524865	Retail sale of computers and standard software
524870	Retail sale of telecommunications equipment
524885	Retail sale of pet animals
524895	Sex shops
524899	Retail sale of other goods
526210	Retail sale of fruit and vegetables via stalls and markets

526290	Other retail sale via stalls and markets
526300	Other non-store retail sale
453100	Installation of electrical wiring and fittings
011220	Nurseries

The major part of these industries are used in full, however there are some exceptions as described below:

For the very large industry 524865 Retail sale of computers and standard software, it is assumed that only 85% of VAT sales are to private consumers. This percentage is based on the high level of household consumption of PCs which emerged from the FU over a number of years, an item which is subject to a great deal of sampling uncertainty in any given year.

For 011220 Nursery gardens, 90% of VAT sales are assumed to be for household consumption expenditure. The same applies to electrical installation businesses, where 10% of VAT sales are assumed to be household consumption expenditure. Unlike nurseries and electrical installation businesses, the DOI covers all turn over in bakers' shops, i.e. both retail sales and sales of own products. No correction is therefore necessary for bakers' shops.

The DOI covers "do-it-yourself centres" (DIY centres) and paint and wallpaper shops. Most sales in these units, however, are goods used for input in construction and not household consumption expenditure. Only 5% of sales are assumed to be household consumption expenditure and the remaining 95% to be input in construction. The latter share, including VAT, is deducted from sales to households as consumers according to DOI on the basis of VAT sales in 524620 retail sale of building materials and 524630 Retail sale of paint and wall paper. However, with these percentages it should be remembered that all materials for repair and maintenance of buildings in the Danish national accounts are channelled through the special materials industry 450004, as described in Section 3.12. The share of expenditure on materials, which goes to ordinary minor repair and maintenance of dwellings, and which is normally the responsibility of tenants, and the corresponding share for owner-occupiers, are lumped together under consumption in households under the product balance "building repairs".

Step 3: DOI correction for new businesses

The DOI does not include turnover in new businesses started in the current year. Sales in businesses which have ceased trading are not counted either. Consequently, the DOI includes a systematic underestimate. A correction is using grossing factors based on annual statistics on business start-ups.

Step 4: Correction for filling station sales of goods not connected with motor trade

The DOI does not cover sales of food, beverages and tobacco etc. at filling stations. Sales of goods not related to motor vehicles are calculated in the spreadsheet for the "motor vehicle group", i.e. DK-NACE 50. The figure for sales of goods from kiosks etc. at filling stations is input into the input data sheet, with sales divided into 80% for the main group of food, beverages and tobacco and convenience goods and 20% for other consumer goods.

Step 5: Grossing up the household budget survey

For any given year, the FU is grossed up by the national accounts division using the method recommended by the primary statistics division. The Danish FU includes a correction for differential non-response in the individual strata. The reason is that in Denmark it is possible to use income information from register data relating to households in the sample, thus ensuring that all income groups are correctly represented in the grossing up.

Step 6: National accounts coding of the FU and extra grossing up

A key is established to convert from the FU product codes to the national accounts consumption groups and the grossed up FU is aggregated to consumption groups. A correction is also made for definitional differences between the national accounts and the FU (insurance, gambling, etc.). There is then an extra grossing up to correct for any skewness in the FU's average household size and persons not living in households. The correction factor is calculated as the average number of persons in the country in the reference year divided by the number of persons covered by the FU.

The “extra grossed up FU” is used as the only source and without any further adjustments for consumption groups:

4300	Regular repair and maintenance of dwellings
4410	Refuse collection
5330	Repair of major household appliances
5620	Domestic and homecare services
9150	repair of a/v and computers

Step 7: Creating a distribution basis for the DOI, supplemented and corrected, and for the FU

For each of the three main groups of goods in DOI, the initial estimate is equal to the value of retail sales to private consumers taken from the DOI as supplemented and corrected. Within each of the main groups of goods, the totals are distributed over the individual consumption groups as shown in step 1 in proportion to the FU distribution (the extra grossed up FU from step 8), but five groups where the FU figures are systematically skew are not included. These are 1182 chocolate and confectionery, 1220 mineral waters and soft drinks, 2110 wine and spirits, 2130 beer and 2210 tobacco products. The distribution basis is set up for the FU and the DOI to exclude these five groups. The FU figures are grossed up/down so that the totals match the supplemented and corrected DOI.

Figures are added for farmers' consumption of own products and direct sales to private consumers in consumption groups 1120 meat, 1141 eggs and 1142 milk, cream, yoghurt, etc. The source is agricultural statistics. The consumption of own products by other economic operators, as assessed for tax purposes, is considered to be covered via the DOI's VAT-based grossing up. During a subsequent step, there is an allowance for fringe benefits and the black economy.

Step 8: Consumption groups 1182 chocolate and confectionery, 1220 mineral waters and soft drinks, 2110 wine and spirits, 2130 beer, 2210 tobacco and 7100 purchase of vehicles

The goods covered by these consumption groups are all imposed by product taxes, and information about the taxed quantities combined by the tax rules are the basis for the estimates of household consumption.

The initial estimates for the six consumption groups are equal to the values in the provisional national accounts calculated in year t+1. When the provisional accounts are less detailed, they are broken down to the detailed final accounts consumption groups using the latest final year.

Step 9: Allocation of consumption of non-residents (tourist income)

When the target totals are calculated on the basis of the FU, purchases by foreign tourists in Denmark is not included in the consumption expenditure on the economic territory. In order to incorporate this expenditure in the relevant consumption groups a correction is made on the basis of input/output multipliers. The following consumption groups based on the FU are corrected for tourist expenditure:

3140	Laundry, dry cleaning etc.
6200	Out-patient services
7210	Repair and maintenance of motor vehicles
7300	Transport services
8100	Communications
9400	Recreational and cultural services
9911	Hairdressing salons etc.

Step 10: Consumption groups estimated from the supply side

For various consumption groups, the best initial estimate is obtained by using supply values either directly or as a supplement to the FU. The following consumption groups are covered by supply side estimates:

4100	Housing
4200	Imputed rentals
6300	Hospitals
9700	Education
9931	Retirement homes, day-care centres etc.
9932	Kindergardens, Creches etc.
9940	Insurance
9950	Financial services (both directly paid services and FISIM)
9960	Other services (partly)

Step 11: Water and energy

Initial estimates for consumption groups:

4430	Water supply and sewage services
4510	Electricity
4520	Gas
4530	Liquid fuels
4540	Hot water, steam etc.
7220	Fuels and lubricants

are obtained from product balances for energy products compiled in the special “energy sub system”. For 4430 Water supply and sewage services an additional value for sewage service from the supply side is added.

Step 12: Package holidays

The calculation of consumption group 9600 Package holidays is based on Statistics Denmark's statistics on business trips and holidays which is based on telephone interviews and is grossed up to cover the total population.

Step 13: Tourist expenditure and –income

Consumption groups 9980 Consumption of non-residents on the economic territory and 9990 Consumption of residents in the ROW, which is the same as tourist income and – expenditure, are based on the settlements statistics as described in chapters 5.16 and 5.18.

Step 14: Inclusion of fringe benefits and black economy

After the above described calculations, fringe benefits and expenditure on black activities are added to relevant consumption groups. The calculation of fringe benefits and the black economy are described in chapter 7. It must be noted, that illegal activity are not added to household consumption expenditure. Illegal activity is only included as an explicit correction to GDP and GNI for the fourth own resource purposes.

Step 15: Balancing correction based on experience

Finally, the values for the individual consumption groups are multiplied by a set of factors which are determined by experience with the balancing of the national accounts during previous years, typically based on experience from balancing the previous year. When the initial estimates are made, account is taken of any known bias in the estimate of the individual consumption groups based on sources from the expenditure (uses) side. If, for example, the first of the consumption groups, 1110, bread and cereals, was adjusted in the latest final national accounts to a value which was two percent above the initial estimate, the level obtained from Step 12 is multiplied by a factor of 1.02 when the final initial estimate is worked out for household consumption of group 1110.

Step 16: Balancing in the provisional accounts calculated in year t+2

The final target totals are then used for compiling the provisional accounts for year t in year t+2. These balanced household consumption expenditure figures are then used as target totals when balancing the final national accounts in year t+3.

5.7.3 Balancing in the framework of the national accounts product balance system

The target totals as described above for household consumption expenditure are included with the other initial estimates for the supply and use components in the balancing of the national accounts. In Denmark's case, supply and use or, equivalently, GDP as compiled from the output and expenditure angles - are balanced in a very detailed product balance system covering around 2 350 products.

Table 5.3 shows the target totals, the balanced values from the preliminary accounts, the balanced values from the final national accounts and values from the FU.

Table 5.3 Initial estimates and adjusted values for household consumption by consumption group (COICOP) and values according to the 2003 household budget survey (FU)

COICOP-	Initial est. for prelim.	Balanced preliminary	Balanced final	Grossed up	National accounts/ FU
consumption group	accounts	national	national	household	
72 grouping	DKK mill.	accounts	accounts	budget	(3)/(4)
		DKK mill.	DKK mill.	survey (FU)	
				DKK mill.	
	(1)	(2)	(3)	(4)	(5)
1110 Bread and cereals	11 135	11 135	11 083	12 463	0.89
1120 Meat	17 326	17 326	17 245	16 218	1.06
1130 Fish	3 215	3 215	2 992	3 173	0.94
1141 Eggs	1 159	1 159	1 119	1 080	1.04
1142 Milk, cream, yoghurt etc.	5 950	5 950	5 892	5 781	1.02
1143 Cheese	3 961	3 961	3 935	3 953	1.00
1150 Butter, oils and fats	2 249	2 249	2 176	1 806	1.21
1160 Fruit and vegetables except potatoes	9 853	9 853	10 017	11 737	0.85
1171 Potatoes etc.	1 539	1 539	1 539	1 699	0.91
1181 Sugar	435	435	436	404	1.08
1182 Ice-cream, chocolate, etc.	10 339	10 339	10 032	8 401	1.19
1190 Food products n.e.c.	3 161	3 161	3 059	2 264	1.35
1210 Coffee, tea and cocoa	2 556	2 556	2 570	2 095	1.23
1220 Mineral water, soft drinks and juices	6 887	6 887	6 490	4 942	1.31
2110 Wine and spirits	9 284	9 284	8 331	9 136	0.91
2130 Beer	5 264	5 264	5 349	3 271	1.64
2210 Tobacco	14 104	14 104	14 284	10 234	1.40
3110 Garments and clothing materials etc.	26 419	26 419	26 368	24 619	1.07
3140 Laundry, dry cleaning etc.	555	555	547	710	0.77
3200 Footwear	5 807	5 807	5 666	5 169	1.10
4100 Actual rentals for housing	40 613	40 613	39 937	50 797	0.79
4200 Imputed rentals for housing	82 470	82 470	81 117	53 654	1.51
4300 Regular maint. and rep. of dwellings	5 615	5 615	5 269	12 170	0.43
4410 Refuse collection etc.	3 928	3 928	3 906	8 258	0.47
4430 Water supply and sewerage services	9 567	8 831	8 712	8 145	1.07
4510 Electricity	17 275	16 875	16 816	15 272	1.10
4520 Gas	4 679	4 679	4 663	2 659	1.75
4530 Liquid fuels	4 182	4 582	3 929	3 893	1.01
4540 Hot water, steam etc.	15 197	15 397	15 533	23 904	0.65
5100 Furniture, furnishings, carpets etc.	15 109	15 109	14 727	13 432	1.10
5200 Household textiles	3 233	3 233	3 130	3 382	0.93
5310 Major household appliances	5 952	5 952	5 782	6 167	0.94
5330 Repair of major household appliances	680	680	676	119	5.66
5400 Glass, tableware and househ. utensils	4 477	4 477	4 203	3 741	1.12
5500 Tools and equip. for house and garden	3 589	3 589	3 423	4 242	0.81
5610 Non-durable household goods	3 633	3 633	3 471	4 662	0.74
5620 Domestic and home care services	2 722	2 722	2 782	4 797	0.58
6111 Medical and pharmaceutical products	5 329	5 329	5 208	5 421	0.96
6112 Therapeutic appliances and equipment	2 871	2 871	2 823	2 613	1.08
6200 Out-patient services	6 958	6 958	7 097	8 077	0.88
6300 Hospital services	2 150	2 150	2 167	159	13.61
7100 Purchase of vehicles	25 252	25 360	24 451	26 593	0.92
7210 Mainten. and repair of motor vehicles	16 281	15 681	15 263	11 591	1.32

7220 Fuels and lubricants	18 110	18 402	17 878	18 892	0.95
7240 Other services related to personal transport equipment	7 073	7 073	7 021	2 945	2.38
7300 Transport services	8 038	8 038	7 683	10 609	0.72
8100 Communications	12 977	12 977	13 728	14 682	0.94
9110 Radio and television sets etc.	4 317	5 099	4 962	4 296	1.16
9120 Photographic equipment etc.	1 064	1 300	1 178	892	1.32
9130 Data processing equipment	6 028	6 228	6 996	4 848	1.44
9140 Record. media for pictures and sound	2 690	2 990	2 996	3 328	0.90
9150 Repair of a/v and data processing equipment, etc.	900	900	898	231	3.89
9200 Other major durables for recreation and culture	2 611	2 811	2 801	2 726	1.03
9300 Other recreational items and equipment	14 595	14 595	14 455	15 812	0.91
9400 Recreational and cultural services	22 842	22 842	23 381	16 703	1.40
9510 Books, newspapers and periodicals	9 329	9 429	9 248	7 791	1.19
9530 Stationery and drawing materials etc.	1 424	1 424	1 414	1 185	1.19
9600 Package holidays	4 964	5 716	5 716	8 004	0.71
9700 Education	5 103	5 114	5 157	2 628	1.96
9810 Catering	27 318	28 911	28 696	20 440	1.40
9820 Accommodation services	3 261	3 261	3 164	5 296	0.60
9911 Hairdressing salons etc.	5 534	5 234	5 399	5 543	0.97
9912 Appliances, articles and products for personal care	8 435	8 435	8 311	8 756	0.95
9921 Jewellery, clocks and watches	1 974	1 824	1 746	2 392	0.73
9922 Other personal effects	2 829	2 829	2 744	2 288	1.20
9931 Retirem. homes, day-care centres etc.	3 663	3 663	3 601	338	10.64
9932 Kindergartens, crèches etc.	9 769	9 769	9 788	6 788	1.44
9940 Insurance	16 240	16 700	16 393	19 460	0.84
9950 Financial services n.e.c.	34 726	32 377	32 327	1 576	20.51
9960 Other services n.e.c.	4 583	4 583	4 477	1 582	2.83
9980 Consumption of non-residents on the economic territory	-35 316	-35 316	-35 316		
9990 Consumption of residents in the ROW	35 480	35 480	35 286		
Total	663 359	664 621	656 340		

The table shows that for 2003 the first balancing resulted in an upward adjustment of 1 262 mill. DKK and the second balancing, which was part of balancing the final accounts, resulted in a subsequent downward adjustment of 8 281 mill. DKK.

As regards the comparison of household consumption in the national accounts and the grossed up household budget survey (FU), the general impression is that the two estimates are very similar for all consumption groups where, a priori, there must be expected to be a good match, because the FU has the same definitions as the national accounts and low sampling uncertainty for the items in question, especially expenditure which the vast majority of households incur in each accounting period and where there is no particular bias. For groups 1182 ice-cream, chocolate and confectionery, 1220 mineral waters and soft drinks, 2110 wine and spirits, 2130 beer and 2210 tobacco, along with 9810 catering, the FU is known normally to have a marked downward skew.

5.8 NPISH final consumption expenditure

Non-market output of NPISHs is produced in industry 910000 Activities of membership organisations and 853209 Social institutions for adults and is allocated to final consumption expenditure in a special column in the supply and use tables. As NPISH final consumption expenditure is calculated from the supply side, sources and methods for this component have already been described in chapter 3, more specifically sections 3.1.5.3, 3.20 and 3.21.

5.9 Government final consumption expenditure

Government final consumption expenditure can be split into:

- 1) Individual consumption expenditure
- 2) Collective consumption expenditure

1) Individual consumption expenditure

Individual consumption expenditure consists of:

- Social benefits in kind (D.631) and
- Transfers of individual non-market goods or services (D.632).

Social benefits in kind refers to goods and services which general government purchases on the market and makes available to households. According to ESA 95, such purchases are not included in intermediate consumption or the output value of general government but are allocated directly to final uses as individual consumption of market goods and services paid for by government. This is logical, since the products purchased by government non-market producers are not processed further before being made available to households. In the vast majority of cases, they are supplied directly from the market producer - a general practitioner, for example - to the recipient households. In Denmark's case, almost all transfers in kind of market products are health insurance benefits. The values are taken directly from government accounts which have 100% coverage, and must be considered fully reliable.

Transfers of individual non-market goods or services consists of output of government, individual non-market services less sales income from these individual services less the value of own-produced software in those units. The sources and methods for estimating output were described in Section 3.1.3.1 as part of the description of the output-based estimate of GDP and Section 4.12 referring to the consumption of fixed capital. Reference should therefore be made to these sections. Information on sales income is taken directly from government accounts. The value of own-produced software is based on total wages and salaries for highly qualified computer staff assumed to be working on the development of software and large databases. A mark-up factor is applied to total wages and salaries to cover intermediate consumption and the consumption of fixed capital.

2) Collective consumption expenditure

Collective consumption expenditure consists of output of government non-market services used for collective, i.e. non-individualisable, government consumption, minus sales income from these collective services minus the value of the software produced in those units. The sources and methods for estimating the output value were described in Section 3.1.3.1 as part of the description

of the output-based estimate of GDP and Section 4.12 referring to the consumption of fixed capital. Reference should therefore be made to these sections. Information on sales income can be taken directly from government accounts. The value of own-produced software is based on total wages and salaries for highly qualified computer staff assumed to be working on the development of software and large databases. A mark-up factor is applied to total wages and salaries to cover intermediate consumption and the consumption of fixed capital.

The split between transfers of individual non-market goods or services and government collective consumption expenditure is based on the COFOG classification as defined in ESA95 Paragraph 3.85.

The relationship between government output and government final consumption expenditure by sub-sector is shown in table 5.4.

Table 5.4 Relationship between general government output and final consumption expenditure by sub-sector. 2003

DKK million	S.1311	S.1313	S.1314	S.13, total
+ Compensation of employees	65 432	184 567	2 472	252 471
+ Consumption of fixed capital	11 059	15 648	-	26 707
+ Intermediate consumption	42 116	74 610	846	117 573
+ Other taxes on production and –subsidies, net	651	-3 562	1	-2 910
= Output	119 258	271 264	3 319	393 841
+ Social benefits in kind	-	20 075	-	20 075
+ Income from sales	-16 153	-25 755	-7	-41 914
+ Own account software	-424	-342	-	-766
= Consumption expenditure	102 681	265 243	3 312	371 236

Note: S.1311: Central government, S.1313 Local government, S.1314 Social security funds

5.10 Acquisitions less disposals of tangible fixed assets

5.10.1 Introduction

This component of final expenditure is estimated in the Danish national accounts the following product breakdown:

Table 5.5 Gross fixed capital formation in tangible assets, by type

Type	DKK million
Machinery and equipment	75 138
Transport equipment	31 666
Buildings	108 659
<i>of which</i>	
Dwellings	68 054
Non-residential buildings	40 605
Structures	27 104
Livestock	-19
Total	242 547

As far as possible all of these are estimated using the expenditure approach. Since the industrial accounts statistics in 1999 was extended to cover most industries with market producer units, it has been possible to estimate capital formation in tangible fixed assets in most industries with a distribution by buildings, structures and a residual consisting of machinery, transport- and other equipment. The estimates from the uses side are confronted with the available information on the domestic supply of investment goods by product in an “investment matrix” framework similar to the framework used in supply and use matrices. A more comprehensive description of the methods used in the compilation of investment matrices can be found in 5.10.4 below. The first version of the investment matrices for 2003 was compiled for the preliminary annual accounts. During this process decisions were made on investment in those industries where investment data are scarce. Such initial estimates may be adjusted before the balancing of supply and use tables begins. Hence there is no clear borderline between supply side and uses side based estimates.

During the recent years widening of the scope of the industrial accounts statistics have led to estimates of GFCF in machinery, equipment and major building repairs that have gradually changed from supply side estimates to estimates that are mainly based on information from the uses side.

The estimates for construction of new buildings are based on either accounting statistics with very detailed coverage of actual observations or a calculation based on the exhaustive register of buildings (the BBR) and prices pr square meter for the different types of buildings.

The statistical sources for agriculture, certain industries dominated by a few big units and government or government controlled units can be assumed to contain very reliable estimates of GFCF. For all industries covered by the industrial accounts statistics the same kind of information is available. It should however be taken into account that GFCF-estimates are often less reliable than other estimates based on the industrial accounts statistics. Annual GFCF-figures tend to be more volatile than for instance the figures for intermediate consumption. Fluctuations in reported

figures will be reflected in the grossed up values, adding to uncertainties in the GFCF-estimates of industries for which the investment figures are only partially based on questionnaires or published annual reports. Furthermore the methods used in grossing up will tend to underestimate investment in newly started enterprises that have not yet supplied questionnaires or annual reports to accounts statistics. During the start-up phase such enterprises will often have comparatively small sales and employment, but considerable capital formation can take place in the same period.

Even after the introduction of a direct estimate of capital formation in machinery and equipment which is expenditure-based, it seems likely that the estimate for this component will still to some degree need to be adjusted to take into account the supply of investment goods.

5.10.2 Subsystems for calculating GFCF by product

Transport equipment

The initial estimate prior to balancing for acquisitions less disposals of motor vehicles is based on the Vehicle Statistics Register, which in turn is based on the Register of Motor Vehicles. Similarly, the estimate of capital formation in big ships and aircraft is based on register information for each individual vessel and each individual aircraft. Capital formation in small ships, boats and aircraft, railway rolling stock, containers and other types of – less important types of - transport equipment is estimated from the supply side using the commodity flow method. In 2003, capital formation in transport equipment covered 61 products in the supply and use tables.

Dwellings

The construction of new dwellings is estimated from the number of square metres of activity in the exhaustive Register of Buildings and Dwellings (BBR). "Square metres of activity" means the number of square metres constructed on average in the calendar year (quarter). The capital formation is therefore counted as and when the building progresses and not on the completion date. The square metres of activity are calculated from information in the BBR on dates when the individual buildings are started and completed. There are four types of new housing construction in the calculation, each with an average price per square metre - a "standard square metre". The calculation is stratified into two geographical areas, the Copenhagen region and the rest of the country. The square metre prices are noticeably higher in the Copenhagen region than elsewhere. The benchmark for these prices dates back to 1993, when a committee under Danmarks Statistik, which included experts from the Ministry of Housing and *Statens Byggeforskningsinstitut* [Danish Building and Urban Research] and financial institutions specialising in the financing of buildings examined all available sources which provided information on housing construction costs. The 1993 benchmark prices are projected to the current year using changes in the index of construction costs for housing reduced by 1% for productivity increases which, by their very nature, will not be captured in an input-based building costs index. The productivity correction factor is based on a comparison of the benchmark figures for years 1969, 1979 and 1993 with changes in the building costs index for housing construction in the intervening periods.

The initial estimate for capital repairs of buildings has been calculated as:

- a share of the total value of repair and maintenance production in construction enterprises
- + the value of materials used in connection with black economy or own account construction
- + the value of work in the hidden economy
- + an imputed value of gross value added in own account GFCF

An initial estimate for total professional repair and maintenance of buildings including capital repairs was calculated from the number of workers and self employed persons working in repair and maintenance activities according to employment statistics for construction and estimated turnover pr. employed person. This calculation is actually done on quarterly data in the system for quarterly accounts. In 2003 the annual total value was DKK 46 019 million. This figure is divided into three parts. Based on the household budget survey grossed up to the total population 2,3% was considered household final consumption in consumption group (GOF OG) 4300. As initial estimate of ordinary repair and maintenance was originally chosen as 41,9% of the total and the residual, 55,8%, was considered capital repairs¹⁸.

The value of materials used for black production and own account GFCF in dwellings is calculated as 62,6% of the estimated capital repairs produced by construction enterprises based on the household budget survey values for 2003.

Table 5.6 shows the calculation of the main components of capital formation in housing construction. It shows the value of new construction and major repairs excluding hidden construction activity, estimated at basic prices. Total capital formation in housing construction also includes taxes/subsidies on products excluding VAT, VAT, hidden construction activity plus transfer costs relating to housing, which have to be allocated to capital formation (estate agents, lawyers, stamp duties, government sales income connected with court rulings).

Table 5.6 Calculation of capital formation, housing construction

Housing construction	Square metres of activity; 1000 m ²		Standard price (before deduction for deductible VAT) DKK/m ²		Value of new construction, basic price DKK 1000		
	Copenhagen region:	Rest of Denmark	Copenhagen region:	Rest of Denmark	Copenhagen region:	Rest of Denmark	Whole country
2003							
Single-family houses:	378.5	1796.1	8 933	8 283	2 764 416	12 164 068	14 928 484
Garages and carports	108.0	518.5	2 680	2 485	236 671	1 053 324	1 289 995
Multi-family houses	242.7	418.2	11 666	10 801	2 315 297	3 693 323	6 008 620
Weekend cottages etc.	51.8	277.9	7 450	7 100	315 640	1 613 448	1 929 088
Total excl. major repairs and hidden economy					5 632 024	18 524 163	24 156 187
Major repairs to dwellings							25 535 409
Incl. major repairs							49 691 596

¹⁸ In principle the percentage for ordinary repair and maintenance is a weighted value of a percentage for dwellings based on the household budget survey and a percentage for buildings in other industries based on industrial accounts statistics. This percentage had been calculated annually for the years 1994 to 2002. However the figure for 2003 seemed to be out of line with earlier years due to some incredible low figures in the household budget survey and it was decided to use the 2002 relations for the 2003 calculation.

During the manual balancing process the value of capital repairs can be influenced by adjustments to the use of ordinary repair and maintenance to the extent that the total for professional repair and maintenance including capital repairs are found so reliable, that redistribution between ordinary repair and capital repair is found to be the most feasible solution.

Private non-residential construction

This is calculated in the same way as housing construction. The value of new construction is calculated by multiplying standard square metre prices according to the 1993 benchmark by square metres of activity. For private non-residential building, too, account is taken of productivity increases when projecting square metre prices on the basis of the construction costs index.

Table 5.7 Calculation of capital formation, private non-residential construction

Private non-residential construction	Square metres of activity: 1000 m ²		Standard price (before deduction for deductible VAT) DKK/m ²		Value of new construction, basic price DKK 1000		
	Copenhagen region:	Rest of Denmark	Copenhagen region:	Rest of Denmark	Copenhagen region:	Rest of Denmark	Whole country
2003							
Farm buildings	75.2	2 021.3	2 108	2 131	127 342	3 459 340	3 586 682
Factories, workshops	79.4	670.5	5 495	5 144	350 302	2 769 110	3 119 412
Offices, shops	258.0	787.2	9 658	8 801	2 000 403	5 562 692	7 563 095
Other private property	74.9	189.9	10 105	9 189	608 074	1 401 539	2 009 613
Total, excl. major repairs					3 086 121	13 192 681	16 278 802
Major repairs to private non-residential premises							7 727 790
Incl. major repairs							24 006 592

Total capital formation in private non-residential construction is obtained by adding non-deductible VAT plus ownership transfer costs.

Public construction for commercial use

This component of capital formation is calculated from accounting statistics for industries where public corporations predominate. In these statistics, the information on new capital formation is divided by type of investment using a breakdown by DK-NACE industry and subsector.

Public construction for non-commercial purposes

Capital formation in buildings by government non-market producer units is estimated from the OIMA system (the calculation system for government non-market activity), which is in turn based on the national accounts estimate of the general government sector in the DIOR database. The information on new capital formation in the OIMA is broken down by type of investment with the help of the breakdown of capital formation by DK-NACE industry and subsector.

Table 5.8 shows the result of the calculations of public commercial and non-commercial construction up to the estimate of the use of the two products at basic price level.

Table 5.8: Capital formation, public commercial and non-commercial construction of buildings

Product number	U454012	U454013	U454015
Text	Public	Government	Buildings
1000 DKK	commercial	non-	for military
	construction	commercial	GFCF
		construction	
Capital formation	2 739 383	10 187 444	206 181
Of which: Stamp taxes	5 143	59 317	0
Lawyers	6 830	82 218	0
Real estate dealing	21 207	272 775	0
Total trading costs	33 180	414 310	0
Purchasers' price incl. VAT	2 706 203	9 773 134	206 181
Of which: VAT	207 225	1 925 773	40 627
Taxes	7 659	1 829	0
Basic price	2 491 319	7 845 532	165 554

Private structures

Capital formation is here calculated from the expenditure side, as the total value of all new civil engineering structures, according to whatever sources are available. In practice almost all investment in such structures is covered either by agricultural statistics, by surveys of investment in extraction of crude oil and gas or by the industrial accounts statistics. The calculation is the same as that used to work out target totals for capital formation by industry. It is assumed that there are no net product taxes and VAT levied on private structures. Table 5.9 shows the values for 2003 and the sources used.

Table 5.9: Calculation of capital formation in private structures

DKK 1000	Capital formation, private structures*	Source
Agriculture (soil improvement, etc.)	104 000	Agricultural statistics
Extraction of crude oil and natural gas	5 258 444	Specific industry statistics for industry 110000
Accounting statistics	224 094	Calculation of capital formation on the basis of accounts statistics
Other private structures, horticulture, forestry	152 967	Other measures for capital formation matrices
Total	5 739 505	

*) Small differences to values shown in the process tables appear as a result of investment/disinvestment in existing structures.

Public commercial structures, plus public non-commercial structures

Capital formation in structures in public corporations and in the general government sector, like the values for new building, comes from accounting statistics for industries where public corporations predominate and the OIMA new capital formation figures (OIMA: the national accounts calculation system for general government based on the DIOR database). This capital formation can be seen in Table 5.10.

Table 5.10: Public capital formation in structures.

Product number	U454022	U454023	U454025
Text	Public commercial structures	Government non-commercial structures	Structures for military GFCF
1000 DKK			
Capital formation = purchasers' price incl. VAT	16 226 928	4 916 732	220 430
Of which: VAT	922 774	908 188	43 246
Taxes	0	-3 209	0
Basic price	15 304 154	4 011 753	177 184

Military capital formation

The information on military building and civil engineering work comes from extracts from public accounts. Out of a total value in purchasers' prices including non-deductible VAT of DKK 646 million in 2003, DKK 396 million is allocated to capital formation while the remaining DKK 250 million is counted as intermediate consumption in general government under industry 752002, the provision of services to the community [literally "defence, police and the administration of justice"], since these are ordinary repairs and maintenance or weapons systems which should not count as capital formation, according to the ESA 95.

Livestock

The relatively minor item "changes in agricultural livestock" is explained in the section on agricultural statistics.

5.10.3 Estimates based on accounts statistics adjusted with regard to domestic supply of inv. goods.

In 2003 around 70% of the investment in machinery and equipment¹⁹ took place in industries covered either by surveys and censuses, accounts statistics, or administrative records. To provide an initial estimate for total investment from the uses side these sources had to be supplemented by estimates based on more or less reliable extrapolations from previous years' figures. A complete version of 2003 investment estimated from the uses side was for the first time put together to be used in the compilation of the provisional annual accounts published in 2005. In the framework of the preliminary accounts the first estimate from the uses side is confronted with domestic supply of products typically used for investment purposes, albeit using much more approximate methods than in the final national accounts. The figures for GFCF by industry in machinery and equipment used in the provisional annual accounts will reflect the result of this comparison as well as other balancing considerations. A preliminary investment matrix showing GFCF by product and by industry is then compiled based on the preliminary values for GFCF by industry and each industry's distribution by product from the previous year inflated to prices of the actual year.

¹⁹ Most sources for investment by industry do not distinguish between investment in machinery, equipment and transport equipment. It is thus necessary to estimate the value of investment in "machinery and equipment" as the difference between the total and the estimated investment in transport equipment that has been compiled from other sources.

The final annual accounts use the estimates prepared for the provisional accounts as the starting point for its estimates of GFCF in machinery and equipment. Where updated information on investment by industry has become available, the provisional figures are replaced by the newer values. If major differences between total supply and use of products in the economy appear at the macro level, total investment may also be adjusted even at this initial stage. It is usually assumed that such adjustments should only affect estimates of investment in industries with less reliable information. It follows that the need for credible estimates for GFCF in the affected industries in practice puts some limits on the size of acceptable adjustments.

A new initial investment matrix is prepared using similar procedures as in the preparation of the provisional annual accounts²⁰. This matrix is usually described as the “vertically distributed” investment matrix. It provides an initial estimate of investment by products from the uses side, and it is used as the starting point for the balancing process described in chapter 6.1. In practice investment in machinery and equipment will include approximately 670 of the 2.350 products from the supply and use matrices.

The initial estimate of total capital formation in machinery for 2003 can be seen in Table 5.11.

Table 5.11: Initial estimate of capital formation in machinery and equipment

	DKK million
Value from provisional national accounts	77 206
Initial value based on adjusted provisional national accounts	77 206
Balanced value	75 138

It can be seen that in 2003 the target for total investment in machinery and equipment was not changed before the manual balancing of the supply and use tables.

During the balancing of the SUTs the total was corrected downward by more than 2 billion DKK. The correction was partly due to a reduction of production and investment in windmills²¹ compared to the initial assumption, but it should also be seen in context with the fact that capital formation in structures and repair and maintenance of buildings were both adjusted upwards from the provisional national accounts' values for that same year. A larger production value in construction will usually require larger inputs of materials, equipment, components and engineering services whose alternative use is GFCF in machinery and equipment.

²⁰ Certain cells of the investment matrix may however have been set to a “predetermined” value in cases where specific knowledge is available.

²¹ Windmills are partly treated as structures (the foundations) and partly as machinery (generators and wings).

5.10.4 Breakdown of GFCF by industry and type (“Investment matrices”)

5.10.4.1 GFCF by industry

There is considerable user interest in the breakdown of gross fixed capital formation by industry, and we therefore describe below the sources and methods used for this breakdown, even though it may not always seem directly relevant to GNI. The methods used for estimation of GFCF from the uses side will, however, influence total output of a number of important products that are mainly used, and directly or indirectly they will affect the size of total gross value added.

Industries with general government non-market activity

OIMA (the calculation system for government non-market activity) based on the DIOR database determines the totals, divided by investment into "new capital formation" and "capital formation in existing buildings and structures". Figures are also received for capital formation in software, divided by industry. The OIMA capital formation is transferred to the intermediate system using MLS codes:

6100: New fixed capital formation

6321: Purchases minus sales of existing buildings and structures.

The worksheets with the detailed breakdown of capital formation into DK-NACE industries and subsectors (integrated county, municipal authority and central government, non-integrated county, municipal authority and central government, funds etc.) are received every year from the Public Finances and Prices Division. No detailed (or even provisional) breakdown of the individual subsectors' capital formation into buildings and structures, machinery and equipment etc. is produced annually, but such a breakdown was available for the year 1995. These breakdowns have been projected to the following years using series on most detailed level available from the division of government finances as basis for the extrapolation. The figures in a full breakdown are matched with the final OIMA system figures in the national accounts' 130-industry breakdown. Figures for purchases minus sales of existing buildings and structures in a breakdown by industry are included.

Industries covered by corporations controlled by government

A worksheet containing the results of statistics for industries where public corporations predominate is received from the Public Finances and Prices Division. This sheet also supplies input data for various of the national accounts' industry-specific calculations and for the capital formation figures for buildings and structures which are used to work out the value of new buildings and new structures in public enterprises in the construction system.

The worksheet includes capital formation in buildings, structures, machinery and equipment and transport equipment plus software, divided by DK-NACE industry. With the help of an extract from accounting statistics for industries where public corporations predominate, it is also possible to produce a separate estimate for that share of the capital formation which relates to purchases minus sales of existing buildings and structures. Various changes have had to be made to the sheet's investment figures on the basis of other sources. Investments in supplies of electricity are divided up into buildings, structures and machinery. In addition, substantial sales of existing electricity power stations have been taken out or, more accurately, offset against new capital formation, since it must be assumed that there has been asymmetrical recording of the amount as a result of

structural changes in the branch. In addition, capital formation in the supply of gas and in railways is adjusted to the national accounts' own breakdowns by kind on the basis of the accounting information of the enterprises concerned.

Industries covered by the industrial accounts statistics

In 2003 the industrial accounts statistics covers national accounts' 130 industries 140000-370000, 450000-550000, 602223-640000, 701109 and 710000-740000. The statistics are now exhaustive in this field, i.e. they assign accounting figures to all units in the industries in question. The information is available as firm and/or workplace statistics. For national accounts purposes, the two sets are processed so that all the capital formation information used is allocated to workplaces, and it is this information which is used to compile capital formation by function. With the processing of accounting statistics, information on capital formation is transferred to the intermediate system, in a breakdown by MLS code:

6110: Purchases of intangible assets (in firm statistics only)
6121: Purchases of existing buildings
6123: Construction of new buildings
6124: Rebuilding and improvements to buildings
6125: New layout and rebuilding of roads, harbours, etc.
6134: Purchases of plant and machinery and equipment (operating resources)
6140: Prepayments and plant and machinery under construction.

6210: Disposals of intangible assets (in firm statistics only)
6221: Sales of existing buildings (including land value)
6223: Sales of existing roads, harbours, etc.
6234: Sales of plant and machinery and equipment (operating resources).

Under the items relating to the enterprises' ordinary operations, there is now a separate item for acquisitions of equipment recorded as current expenditure:

7025: Expenditure on acquisitions of equipment, expensed

While most of this expenditure is considered GFCF, a small share (12% in 2003) is treated as intermediate consumption in accordance with the small tools rule.

The industrial accounts statistics also contains information on purchases and sales of unbuilt land which are not included in gross capital formation, coded:

6122: Purchases of unbuilt land
6222: Sales of unbuilt land.

Through the recent years a growing share of total GFCF of big manufacturing enterprises have been recorded as plant and machinery under construction and coded 6140. At the time when these investment projects are eventually finished the notes of the accounts show how the value is transferred from plant and machinery under construction to the headings that are used to distinguish between buildings, structures or machinery and equipment, but this information is usually not available at the time of investment, and to make things even worse, to avoid double counting of the same investments these transfers are never recorded in the industrial accounts statistics. In 2003 it

has been necessary to divide this investment evenly between buildings and machinery/equipment. Within a few industries plant and machinery under construction has accounted for a large share of investment. In some cases it has been necessary to split investment coded as 6140 manually after further inquiries into the matter. An example is DK/NACE industry 6100: Sea transport, where most of 6140 was found to represent ships under construction.

For those industries covered by industrial accounts statistics, i.e. in the 2003 national accounts' 130 industries 140000-370000, 450000-550000, 602223-640000, 701109 and 710000-740000, the initial estimates of capital formation are divided into buildings, structures, machinery, equipment and transport equipment etc. plus software on the basis of information in the intermediate system. As a default hypothesis, we assume that the land value makes up 20% of the total value of the existing buildings and structures items under codes 6121, 6221, 6263 and 6226. Acquisitions of equipment expensed in the accounting period are corrected as before in the intermediate system for that share which is transferred to current intermediate consumption.

A problem in the industrial accounts statistics is that start-ups are seldom included in the statistics on the basis of reporting forms or accounts. In such cases, information on capital formation is normally compiled from employment or VAT information using standard ratios based on enterprises which have been operating normally throughout the period in question. As already mentioned, capital formation must be expected to be underestimated in respect of businesses which have just started up.

Attempts have been made to correct for this undervaluation with the help of statistics on start-ups. Information is available in VAT statistics for the first four quarters of the lifetime of each new business. Since the figures from the statistics for start-ups are received in a breakdown by quarter, it has been possible each quarter to separate out the share of VAT sales and purchases which relates to start-ups, and to compare that with the share of other enterprises in each branch at the 130-industry level. With this exercise, therefore, an enterprise set up in the previous calendar year can be picked out as a "start-up" in from one to three quarters of the current year, depending on when it started up, but included as a non start-up during the rest of the year. This should not lead to any serious problems with the calculation. It is now assumed that the share of VAT purchases in excess of the "normal", which can be calculated using the VAT purchases/VAT sales share in non start-ups, should be taken to be capital formation which was not included in the accounting statistics' calculations based on standard figures. With the balancing in mind, it seems likely that capital formation in machinery and equipment, in particular, should be marked up, to avoid too large a share for private services, and one important concern was to allocate the addition to the accounts statistics' capital formation figures to industries which do in fact include start-ups.

According to new legislation that came into force January 1st 2002, financial leasing contracts must now be shown as capital formation in business accounts. From 2003 it can be assumed that all business accounts follow principles that are similar to the national accounts concepts. As a consequence the correction for differences in concepts has been phased out, 2002 being the last year affected by old accounting practices.

Industries covered by other sources

There are independent sources of information on capital formation in a few other private industries such as branch 110000: extraction of crude petroleum and natural gas. In this case, the total value of target total module (MTM) code 2058: mineral exploration, is determined at the same time,

including the enterprises' own output. Agricultural capital formation is taken from agricultural statistics. In a few other cases, the initial estimates from the previous calculation system are adopted - for capital formation in horticulture and forestry, for example. Finally, capital formation in 651000: monetary intermediation, 652000: other financial intermediation, 660102: life insurance and pension funding and 660300: non-life insurance is worked out from the accounting figures for those industries

5.10.4.2 GFCF by industry and type

Buildings and other structures

Capital formation in buildings in government non-market services, public corporations, agriculture and industries covered by the industrial accounts statistics is worked out in the systems which process the capital formation in question - cf. above. Within these areas, capital formation is normally retained as calculated, with the estimated breakdown into new building and purchases less sales of existing buildings.

Total construction of buildings is estimated in the construction and civil engineering system, the basis for government commercial and non-commercial building being the information on capital formation compiled for the calculation system for capital formation in a breakdown by industry. The calculation of the output value of construction and civil engineering ignores, of course, that share of capital formation accounted for by purchases and sales of existing buildings. Capital formation in industry 702009, dwellings, is fixed as the value calculated in the construction and civil engineering system.

The residual of private non-residential building is allocated to the (now relatively few) industries which do not have accounts-based target totals for capital formation in construction. The initial targets are here based on any kind of available information and if necessary on more or less well founded extrapolations from the values in previous years.

Net purchases and net sales of existing buildings on Danish territory should add up to the same total value. (At present, in line with the calculations of construction and civil engineering, all change of ownership costs are for practical reasons distributed together with construction of new buildings). Purchases or sales of existing buildings are as a general rule shown in those industries where the figures can be based on sources. However, it was decided to allocate the residual to industry 702040, the letting of non-residential buildings.

As was the case with buildings, capital formation in structures in government non-market services, public enterprises, agriculture and industries covered by accounting statistics is worked out in the systems which process the capital formation in question. We assume here that there is normally no capital formation in structures other than in industries for which it can be compiled from a specific source. One exception is branch 702040, the letting of non-residential buildings, to which is allocated the residual of investment/disinvestment in existing structures, since, as for buildings in the strict sense, we are constrained by the rule that used structures may not appear or disappear through purchases/sales between industries. The value of new structures is thus determined from the expenditure side, and it is the systems for the compilation of capital formation in a breakdown by industry which supply the final figures for capital formation in structures for the calculation of the output value of construction and civil engineering.

Initial estimates for capital formation in construction and civil engineering in a breakdown by industry are obtained as the sum of the initial estimates for buildings and structures.

Transport equipment

Motor vehicles

Briefly, the method is as follows: information is received from vehicle statistics on opening and closing stocks of motor vehicles recorded in the central register of motor vehicles, and these figures are then divided up by type of vehicle, size category and year of first registration. Next, by matching with the business register, the national accounts' 130 branch codes are added to the vehicles in the industries to give a division into the 130 industries/households, albeit with an undistributed remainder which the National Accounts Division itself has to divide up to ensure that the system tallies. The figures correspond to those used in the "vehicle distribution system", which breaks down by industry those inputs which relate to the operation of motor vehicles, with one change, namely that stocks are calculated as at the end of one year/beginning of the next, so that the change can be calculated for all subgroups. On the basis of assumptions about average prices for the individual categories and survival and depreciation profiles, initial breakdowns are calculated for changes in terms of each vehicle product number divided over the 130 national accounts industries plus private final consumption. From this, we pick out that share of "departures" which may be assumed to be due to "departures" from the total stock, and the remainder is assumed to be investment/disinvestment. The initial estimates in basic prices are supplied with margins, taxes and VAT. These are adjusted to the balanced supply and use tables (SUTs) so that the estimated value matches the value in the supply information. The figures for all capital formation in vehicles are then summed to give the contribution of vehicles to the capital formation target totals for transport equipment.

Other transport equipment

Supply of other transport equipment: railway rolling stock, containers, ships and aircraft.

For other types of transport equipment counted as capital formation, the supply is calculated by product number on the basis of the sources used for the compilation of the supply and use tables (SUTs). The SUT balances for ships and, over the last few years, railway rolling stock as well, plus larger aircraft, are compiled as predetermined values which are retained for the balancing of the SUT. Here, information on the individual deliveries is used, and in a few cases changes in inventories have been specifically calculated imputed (2064 changes in inventories) to produce a match between the supply and use information.

On the basis of a few relatively simple assumptions about which industries invest in the various types of transport equipment and parts etc., the contribution of these products to the target totals for capital formation in transport equipment can be worked out. When these figures are combined with the targets for capital formation in motor vehicles, we get the column showing the initial estimates for target total code 2052 capital formation, transport equipment.

Machinery and equipment

For government non-market services, public corporations, industries included in the industrial accounts statistics, agriculture, the extraction of oil and gas, financial services and insurance, once again capital formation in machinery and equipment and transport equipment - taken together - is calculated from accounting statistics information - cf. above. For each of these industries, targets can be set for MTM (transaction-) code 2050, capital formation, machinery and equipment, by deducting the initial estimates for MTM (transaction-) code 2052, capital formation, transport equipment.

This leaves a few industries for which there is no accounting information on capital formation in machinery and equipment. In some cases it has been necessary to calculate a first estimate as an addition to the targets worked out for capital formation in construction, civil engineering and transport equipment. The additions are adjusted in the light of employment in the industries, and we look at the share of value added and gross operating surplus/mixed income accounted for by capital formation.

The new survey of Danish ICT-expenditure from 2003

A new statistical source that shows outlays for IT related purposes by industry has become available for the first time in 2003. The questionnaire based statistic on Danish business ICT-expenditure examines ICT expenditure in enterprises and in the public sector (state and municipalities). Its total population consists of 17,000 private enterprises from the business register with at least 10 full-time employees. The majority of industries dominated by private enterprises including the financial sector are included in the population. The criterion of industries for being selected is, that they are included in the industrial accounts statistics and/or that the industries are presumed to have substantial ICT expenditure. However, some industries are excluded: Agriculture, fishing and mining and electricity, gas, heat and water supply. The survey includes the majority of the institutions in the state and the municipalities. Ministerial departments, major agencies and universities are included in the coverage of the state.

The survey include questions on the cost of hardware, pre-packaged and customised software, other ICT (telecommunication equipment, audio and video equipment and other ICT equipment), ICT services and external ICT training.

The national accounts division has had access to a file from the ICT-expenditure survey containing answers from individual enterprises. The results from the survey were grossed up to cover all units covered by the industrial accounts statistics and distributed by workplaces by methods like those used to distribute other accounts information that are only available on the enterprise level. The results were used to distribute computer hardware, telecommunications and other ICT-equipment by industry in the investment matrix for machinery and equipment²². The product categories used in the survey are not completely comparable to the product classifications used in supply and use tables and investment matrices, but can with some caution be translated into aggregates of national accounts products. It seems evident that survey data are undervalued in some industries, and the information is of course not exhaustive as some important areas are left out. Information on investment in General Government is not available with a break down by industry, and the investment is probably also somewhat underestimated here. Nevertheless it seems that for the year 2003 it has been possible to construct a distribution of hardware by industry that is considerably

²² It was also used to distribute software in the investment matrix for GFCF in software and ICT-services as input in the use matrix.

more reliable than in earlier years. As GFCF in ICT equipment is an important part of investment in machinery and equipment, particularly in some service industries, this must be considered a major improvement.

5.11 Acquisitions less disposals of intangible fixed assets

5.11.1 Introduction

Gross fixed capital formation in intangible assets covers three types, as shown in Table 5.12. Software is by far the most important.

Table 5.12: Gross fixed capital formation in intangible assets, by type

Type	DKK million
Exploratory drilling	954
Software and large databases	24 827
<i>of which</i>	
Purchased software etc.	12 951
Own-produced software etc.	11 876
Entertainment, literary or artistic originals	1 507
Total	27 288

5.11.2 Exploratory drilling

In Denmark's case, the only expenditure on mineral exploration at present is on exploratory drilling in the North Sea oil and gas-fields. All concession-holders have to supply accounts to the Danish supervisory authorities, containing information on expenditure on items such as exploratory drilling. The national accounts estimate is based on this exhaustive accounting information.

5.11.3 Software and large databases

Purchased software and large databases

In the Danish national accounts, total capital formation in purchased software is estimated from the supply side using the commodity flow method. A new statistical source based on questionnaires, the statistic on ICT-expenditure, shows outlays on hardware, software and IT-services for private enterprises with at least 10 full-time employees as well as state and municipalities. Results are for the first time available for 2003 and they have as far as possible been used to distribute purchased software by industries in the investment matrix subsystem. While this represents a huge step forward, the available information on expenditure from the uses side still does not cover all industries and still seems to underestimate the cost of software in a number of industries.

Current practice in Danish business accounts seems to contain purchases of software under various headings: To the extent that the software is capitalized the correct solution should be to show it as

investment in intangible fixed assets, but some software will probably still be included as part of tangible fixed assets, especially when software and hardware are purchased together. Some GFCF in software can be found in business accounts among acquisitions of equipment etc. that are treated as current expenses or written down during the accounting year, and some software may even be included in other categories of intermediate consumption. A description of the conversion from business accounts data to the concepts used in the national accounts can be found in 3.321 above.

To the extent that purchases of software fulfil the criterion in the small tools rule in ESA95, it is correct to treat the purchases as current expenditure. The same applies to the purchases of software that are not intended to be used repeatedly for instance because it is input in production of other products (that may be electronic equipment or software systems in the case where some programming is outsourced).

Estimating investment in software from accounts statistics have not yet been feasible. In accounts statistics the information on acquisitions and disposals of intangible fixed assets cover licences, trademarks, sole agencies, software, goodwill and capitalised development, rationalisation and research etc., in other words a mixture of figures which have to be included in gross fixed capital formation and figures which should be excluded. In practice this information is useless without further specification.

Since 1996 the product statistics for the IT industries give a detailed breakdown by product of turnover in the IT-industries. The turnover in each of the industries is broken down into software and different types of IT-services. A considerable share of this turnover is in fact trade in hardware and standard software. The trade activity is separated out and treated as wholesale or retail trade and the production is converted into trade margins. On the other hand some production of software is by-product in wholesale trade, renting of machinery and equipment and in telecommunications and this production is included in the supply.

Estimates of imports and exports are based on information from foreign trade statistics of software packages etc. that is considered goods and from foreign trade in services, based on information used in the compilation of balance of payments. Here imports and exports of licences and royalties have been included as software when imported or exported by Danish firms belonging to the IT-industries or wholesale of software.

In the final national accounts for 2003, total capital formation in purchased software and large databases has been estimated from the commodity-flow as DKK 12 951 million. This figure includes standard software as well as some IT-services (planning, programming, adjustment, installation etc.) that should be included as a part of the GFCF in software. As illustration simplified product balances are shown for software excluding own account (but including value of recorded media) and the relevant IT-services that include production of customised software and tailoring of software to specific needs.

Software excluding own account. Mio. DKK. 2003

Software

Supply	Basic price
Domestic production	9.398
Imports	4.269
Total supply	13.667

Use	Basic price	Wholesale trade margin	Retail trade margin	Net tax on products	VAT	Purchasers' price
Intermediate consumption	3.939	47	48	0	4.034	4.130
Household final consumption	1.541	641	446	0	2.628	3.244
Investment in software	6.260	1.514	287	0	8.060	8.332
Change in inventories	36	10	0	0	46	46
Eksports	1.891	3	0	0	1.894	1.894
						0
Total use	13.667	2.215	781	0	16.662	17.646

Software programming, consultancy etc.

Supply	Basispris
Domestic production	16.184
Imports	3.478
Total supply	19.662

Use	Basic price	Wholesale trade margin	Retail trade margin	Net tax on products	VAT	Purchasers' price
Intermediate consumption	8.487	0	0	0	669	9.157
Household final consumption	26	0	0	0	6	32
Investment in software	4.456	0	0	0	163	4.619
Eksports	6.693	0	0	0	0	6.693
Total use	19.662	0	0	0	838	20.500

Software and large databases produced at own account

Own-produced software etc. accounted for 11.856 mill. DKK or 53% of total GFCF in software and databases in 2003.

Own output is calculated from the supply side, more specifically from total wages and salaries which in each of the national accounts' 130 industries are considered to relate to own output of software.

Total wages and salaries are compiled from Statistic Denmark's salary statistics, i.e. the statistical system which provides information on wage and salary levels and changes by job category. This statistics cover all workplaces with ten or more employees. A new version of the system for compilation of own-account software was introduced with the data revision published in 2005. For all years starting in 1995 the information on wages and salaries was made available to the national accounts division on a more detailed level than before. In the new system the employment figures

used for calculation of the value of own-account software are grossed up to cover the economy as a whole²³.

Since 1995 the starting point is total wages and salaries according to the statistics on employees in DISCO groups 213, computing professionals, and in 3121, programmers. DISCO is the Danish implementation of ISCO, the international classification of occupations. It is thus assumed that wages and salaries in the category of 50% of DISCO 2131 “database administrator, IT consultant, systems analyst”, 100% of DISCO 2132, “systems programmer”, 20% of DISCO 2139, “applications consultant”, and 100% of DISCO 3121, “applications programmer”. In this way it is taken into consideration, that some of the people with the highest education are usually working as executives or as consultants and analysts who are involved in decision making with respect to choice of software systems or even in research and development. The inclusion of ordinary application programmers in the calculation is an important improvement, as most of the coding of computer programs has actually been done by people in this group²⁴.

According to international recommendations only half of the work time of the selected people is considered production of software for GFCF, as no better estimate exist. It is furthermore as in the earlier calculations assumed that only 25% of this time is spent on production of own-account software in DK/NACE industry 722000 is production of own-account software because the programmers of this industry produces most of the customised software sold to other units. In the near future it may probably be possible to refine the calculations as the assumptions on the man-hours used in own account production can be compared with results from a new statistical source, the survey of Danish ICT-expenditure²⁵.

In 2003 the total wages and salaries of the people in question working in market production are multiplied by a mark-up factor of 2.356 or, to put it another way, total wages and salaries are grossed up by 135.6%. Since 1999 this factor is based on accounting ratios in the published industrial accounts statistics for industry 720000 adjusted for that part of the activity that is considered trade in hardware or software. The mark-up is now calculated annually as the relation between total production value (including an estimated value of its own-account software) at basic prices and the wages and salaries relating to this production. It covers intermediate consumption (including overheads at firm level), the consumption of fixed capital, other taxes on production, net, and net operating surplus. For own-account production of software in non-market activities a reduced mark-up factor of 2.1713 is used, that is output is grossed up by 117,13% in 2003, as no mark-up for net operating surplus is applied for non market activity.

²³ Previously there was no grossing up for wages and salaries in small units with fewer than ten employees. Only the wages and salaries for ISCO-group 213 were used in the calculation, while the wages and salaries of the majority of applications programmers, who have for a long time been classified in a subgroup of ISCO 312 were excluded due to the fact that their education for many years did not have status as high level education in Denmark. On the other hand no deduction was made for other work than development of software for GFCF.

²⁴ It must be emphasised that groups DISCO 3122, IT-operators, or DISCO 3129, programming of industrial robots are not included in the calculations as these people are working with the operating of computers or computerized systems and they are usually not writing computer programs.

²⁵ The questionnaire used in the new survey of ICT-expenditure that for the first time was collected for the year 2003 contains questions on the numbers of man-hours used for production of own-account software broken down by production of software for internal use and production of originals of standard software. When the figures for the national accounts of 2003 had to be prepared it was not possible to enquire further into the reliability of the first results from this survey or to investigate the possibilities for use of this source in the estimation of own-account software.

The total value of own-account software calculated in the new system is not significantly different from the result of the system used before 1995. The effect of using 50% of the grossed up values for wages and salaries excluding some people with higher education and including applications programmers seems to roughly net out compared to a calculation based on 100% of people with higher education alone without grossing up. However the distribution by industries that are needed for the investment matrix system seems more plausible.

5.11.4 Entertainment, literary or artistic originals

As might be expected, there are no statistical sources providing information on the value of original works produced in any given year. It has therefore been necessary to base the national accounts calculation on the assumption that the value of the originals in question is equal to the discounted value of future royalty incomes which they will earn.

The problem is that the future royalties are not, of course, known. Denmark is in a favourable situation compared with other countries in that information on current income from royalties from culture and entertainment is available in annual statistics. In the national accounts the simple assumption is chosen, to use the value of royalties received by the artists in question in year t as a proxy for the value of originals created in year t . The reasoning behind this simple convention is as follows: Since there is no information on future royalty earnings, it is assumed that in the long term royalties actually increases somewhat faster than the economy as a whole, since leisure activities have income elasticity greater than one. More specifically, the future real growth rate is taken to be equal to the real rate of interest, which likewise is normally greater than the growth rate of the economy. With these assumptions, the equilibrium value of the originals created in any given year may be estimated as the income from royalties in the same year.

The value thus calculated for 2003 was DKK 1 507 million.

5.12 Additions to the value of non-produced non-financial assets

There are two groups in this category of product transactions:

- P.5131 Major improvements to non-produced non-financial assets
- P.5132 Costs of ownership transfer for non-produced non-financial assets

P.5131

In Denmark's case, this category covers only soil improvement work in agriculture (drainage etc.), information on which is available from agricultural statistics. In 2003, the value was DKK 104 million. This component of capital formation is calculated together with capital formation in structures, and is covered by capital formation in private structures as shown in Table 117 above.

P.5132

This heading covers the costs of transfers of ownership (estate agents, lawyers, stamp duties, public sales income relating to courts of law) of land and natural resources etc. Since the costs of transferring the ownership of land can seldom be estimated independently of the costs of transferring the ownership of the buildings and installations on that land, the aggregate costs of transferring the ownership of land and real estate are considered to be part of gross fixed capital

formation in buildings and structures as described in Section 5.10. The transfer of ownership costs for land and real estate included in the estimate of gross fixed capital formation in 2003 can be seen in Table 5.13.

Table 5.13 Costs of ownership transfer included in gross fixed capital formation

Type	DKK million
income	161
Stamp taxes	1 577
Lawyers	2 163
Estate agents	7 164
Total	11 065

5.13 Changes in inventories

5.13.1 National accounts principles versus the principles in business accounts

The principles underlying the national accounts' treatment of changes in inventories as compared with the estimates in business accounts were discussed in chapters 1 and 3. The section below is more technical and include an example of the national accounts' calculations of inventories. As already mentioned, for a correct estimate of GDP, it has to be possible to split changes in inventories (reported at market prices on the respective dates) between the start and end of the period in question into product transactions in national accounts terms and revaluations (plus, in some cases, other volume changes). In the national accounts, changes in inventories (product transactions) are posted to the capital account whereas revaluations go to the revaluation account. It is also important to ensure that the estimate of changes in inventories at industry level is consistent with the estimate based on special information on the individual products.

The calculation of changes in inventories can be divided into:

- changes calculated on the basis of the change in inventories during the year, according to accounts. These changes occur under MLS codes 2060 (raw materials), 2061 (wholesaling), 2062 (retailing) and 2065 (finished goods and work in progress);
- changes which are calculated regularly on the basis of special information relating to changes in stocks of individual goods, mainly under MLS code 2063.

Changes which are calculated from special information on any given year or introduced at the time of the actual balancing are entered under MLS code 2064.

5.13.2 Accounting figures underlying the calculation of inventories broken down by industry

Industrial accounts statistics

From 1995, the old accounting statistics for manufacturing was replaced by the new industrial accounts statistics, whose coverage have be extended over time to more and more private urban industries. In 2003 Industrial accounts statistics covers DK-NACE industries 140000-370000, 450000-550000, 602223-640000, 701109 and 710000-740000.

In the industrial accounts statistics, all the firms and workplaces in the statistics are assigned the accounting figures which come from questionnaires, annual reports or the tax accounts for firms not covered by the sample. In cases where neither annual accounts, questionnaires nor tax accounts are collected, the missing accounting figures are calculated with the help of "standard ratios" compiled with reference to units for which the data are known. This therefore applies to a large number of small units which are known from VAT statistics only. By grossing up, therefore, the accounting statistics' inventories cover all firms and workplaces in the accounting statistics' industries and there should be no need for the figures to be grossed up any further. The connection between the inventory items in the industrial accounts statistics and the intermediate system codes can be seen in Table 5.14.

Table 5.14: Connection between the industrial accounts statistics and the intermediate system (MLS)

ts	Text	MLS-code	
		Opening	Closing
44	Raw materials, ancillary materials, fuel and packaging	5060	6060
45	Work in progress	5065	6065
46	Finished goods	5065	6065
47	Goods for resale	5061/5062	6061/6062

The primary statistics processing throws up problems such as the lack of concordance between manufacturing/trading activity and the incidence of finished goods and inventories of goods for resale. For the national accounts calculations, there is a (computerised) reallocation of inventories in such units which appear to be incorrectly allocated. The inventories from the accounting statistics thus revised are then transferred to the intermediate system.

SLS-E statistics

Changes in inventories in industries still based on the SLS-E statistics in 2003 have generally only comparatively small inventories of materials used for intermediate consumption. Since the input data for the tax accounting system include information on closing stocks only, opening stocks have to be based on the closing figures from the previous year. Some improbable changes in the inventories of the individual branches are thus unavoidable, most of them arising from a change in the delimitation or branch allocation of units from one year to the next. Since it is not possible in the tax accounting system to trace these changes back to the individual enterprises, a number of estimated corrections have to be made in the breakdowns of opening stocks, where possible in the

form of switches from one industry to another or one sector to another within the same industry. The corrected inventories are supplied to the intermediate system in the usual form.

Industry-specific accounting statistics

To the extent that inventory data are collected in sub-systems using industry specific accounting statistics, the national accounts changes in inventories are calculated outside the central inventory calculation system. The resulting aggregate changes in inventories are transferred to the intermediate system under the codes for changes in inventories only, i.e. 206x, and no stocks are input into the system. In 2003, there were only 2063 changes in inventories in agriculture, 011109, which were transferred to the intermediate system file. Thus any changes in inventories in other industries, where the calculations are based on industry-specific accounting statistics, are ignored unless they come under 2063 or 2064 inventories.

5.13.3 Breakdown of inventories by product

The intermediate system collects data on the industries' inventories at the level of DK-NACE industry/sector and intermediate system codes. For the calculation of changes in inventories in the intermediate system, opening and closing stocks are needed at average prices for the year, and this in turn requires a complete breakdown of inventories by good. The system for the goods breakdown is therefore part of the system for producing the intermediate system, as well as being part of the system for the breakdown of accounting figures by product.

In the national accounts, there may in principle be inventories of raw materials in all industries, not only manufacturing but also in trade, even, or construction and civil engineering and service industries. Inventories of finished products and work in progress occur in manufacturing and a few service industries, whilst inventories of goods for resale, as a result of the definition by activity of the trading industries, occur only in wholesale and retail trade industries. The intermediate system inventories are broken down by sector.

The breakdown by product of the industries' inventory totals is based on the product composition in the balanced supply and use tables for the previous year. The main rule is that for each of the intermediate system's inventory totals there is a column or a combination of columns from the previous year's supply and use matrix. From each of these columns, those products are selected which can go into the inventories in question, i.e. negative SUT values (scrap, disinvestment or negative consumption) are omitted and services, for example, or expenditure on advertising or electricity are not included in the basis for the distribution. The only records in the SUT columns which are extracted for the breakdown of wholesale and retail inventories are those which include wholesale or retail margins. Each inventory total at DK-NACE industry/sector level is then divided up by product in proportion to the selected values from an SUT column or with weighted values from more than one SUT column.

The breakdown by product of the intermediate system inventory totals is at MLS code/DK-NACE industry/sector level, whilst the supply and use matrices (SUTs) contain only breakdowns by commodity number/target total module code/industry. For the breakdown of inventories of raw materials and finished goods, the calculation is based on an SUT for the previous year, which is grossed up to include breakdowns for all DK-NACE industries, with the national accounts industry

breakdown used for all sub-industries. For inventories of finished goods, raw materials and goods for resale, the same breakdown by product is used for each sector represented in the industry.

Totals for inventories of finished goods are broken down as the output of the industry at basic prices. The raw materials totals are broken down as the input of the industry at purchasers' prices excluding VAT. As a general rule, wholesale inventories are divided on the basis of the composition of inputs at basic prices for the types of industry which may be assumed to buy the goods in question. However, there are various branches whose inventories of goods for resale cannot be divided up in this way, and for most of these fixed breakdowns have been laid down. Inventories of retail goods are likewise divided using the composition of basic prices plus wholesale margins for consumption groups, with the individual groups weighted using a key corresponding to the key for the conversion from retail trade branch to consumption group used in the consumption and retail trade margin systems.

Table 5.15: Method for the breakdown of inventories by product

Type of inventory	MLS codes, value level	National accounts industries	Broken down as previous year's SUT
Finished products	5065/6065 basic prices	All	National accounts industry output
Raw materials	5060/6060 purchasers' prices excl. VAT	All	National accounts industry intermediate consumption
Wholesale	5061/6061 basic prices	Main rule	Input in national accounts industry acc. key
	Included in manufacturing basic prices		Output in national accounts branch
	Included in construction and civil engineering basic prices		Input in national accounts branch(es) acc. key
	5001010-501020, 512100-513100, 513700-513890, 515100		Fixed breakdowns by product number. Assumed covered by energy system.
Retail	5062/6062 basic prices + wholesale margin	All except 524890	Consumption group(s) acc. key

Danmarks Statistik has produced for internal use a technical documentation note on the keys used for the breakdowns.

For various industries such as agriculture and those which consist solely of general government, industry target totals are not used for inventories. For agriculture, changes in inventories are covered by the special calculation of agricultural inventories (2063 inventories) at product level.

5.13.4 Calculation of national accounts changes in inventories

For each type of inventory, changes in inventories in the business accounts are calculated as the value of closing stocks minus the value of opening stocks, estimated according to the enterprises' own accounting principles, which means that opening and closing stocks are calculated at different price levels. In the national accounts, changes in inventories should be estimated at the average prices for the year. Ideally, changes in inventories should be monitored throughout the year and all changes split into revaluations (holding gains) and national accounts changes in inventories. Normally, a reasonable approximation of the correct change can be produced by converting the value of both opening and closing stocks to the average prices for the year using the ratio of the year's average price to the price on the date of the inventory estimate. The national accounts change in inventories is then calculated as the difference between closing and opening stocks, at the average prices for the year (ignoring sporadic instances of inventory values being written up or down for reasons other than price changes).

The method used has been unchanged since the benchmark years 1988-92. The price indices used for the conversion of inventories to the average prices for the year are now in every case the "NF index" which can be found for all product numbers in the inventory calculations and is based predominantly on the producer price index. As the end-of-year index, $\frac{2}{3}$ of the December index + $\frac{1}{3}$ of the following January index is used. No different treatment is attempted for inventories estimated according to different accounting principles.

Opening and closing stocks are converted to average prices for the year for all combinations of product number/target total module code/DK-NACE industry/sector following the breakdown of inventory totals by product. The national accounts change in inventories is calculated as closing stocks minus opening stocks for each of these combinations.

Goods which appear in 2063-inventories and energy goods are also included in the breakdown by product of inventories of raw materials, since inventories in the accounts include such stocks. When the changes in inventories columns are worked out in the SUTs, it is assumed that these goods are covered in full by 2063 changes in inventories, and they are therefore omitted from the other changes in inventories, although they are, of course, included in the intermediate system figures for national accounts changes in inventories by MLS industry/sector.

The difference between the MLS industries' (i.e. the detailed DK-NACE industries') national accounts and business accounts changes in inventories is transferred to the intermediate system as a "price correction" under MLS codes 2098 referring to inventories of raw materials and 2099 for inventories of goods for resale. These items are used here to switch from business accounts to national accounts intermediate consumption and consumption of goods for resale.

Table 5.16: Comparison of changes in inventories in business accounts and national accounts, DK-NACE industries: examples

MLS code	DK-NACE	Sector	Opening 1000 DKK	Closing 1000 DKK	Change 1000 DKK	Increase in inventories 1000 DKK	Price correction 1000 DKK
2060	014110	S11	60 508	59 267	-1 241	-2 609	-1 367
2060	014110	S14	48 607	68 569	19 962	19 055	-912
2060	014120	S11	12 333	17 260	4 927	4 663	-262
2060	014120	S14	6 557	7 030	473	328	-142
2060	014190	S11	10 895	7 306	-3 589	-3 883	-294
2060	014190	S14	1 986	2 215	229	186	-41
2060	014200	S11	30 049	19 253	-10 796	-11 562	-768
2060	014200	S14	20 088	12 556	-7 532	-8 047	-516
2060	020200	S11	10 014	16 906	6 892	6 853	-40
2060	020200	S14	7 204	5 132	-2 072	-2 228	-158
2060	050100	S11	1 814	3 560	1 746	1 748	1
2060	050100	S14	191	3 748	3 557	3 556	-1
2060	050200	S11	216 395	269 195	52 800	52 693	-106
2060	050200	S14	71 665	71 325	-340	-369	-28
2060	103000	S11	12 681	12 758	77	-215	-291
2060	103000	S14	10	11	1	0	0
2060	112000	S11	21 085	11 045	-10 040	-10 789	-753
2060	112000	S14	44	22	-22	-22	-1
2060	141110	S11	4 432	5 681	1 249	1 161	-87
2060	141110	S14	143	155	12	6	-3
2060	141120	S11	22	24	2	2	0
2060	141120	S14	0	0	0	0	0
2060	141200	S11	13 776	12 314	-1 462	-1 792	-329
2060	141200	S14	947	1 018	71	50	-20
2060	142100	S11	45 002	102 003	57 001	56 666	-331
2060	142100	S14	5 119	5 530	411	296	-113
2060	142200	S11	89	97	8	7	-2
2060	142200	S14	12	12	0	0	0
2060	143000	S11	74	80	6	8	0
2060	143000	S14	8	8	0	1	0
2060	144000	S11	9 508	14 432	4 924	4 765	-158
2060	144000	S14	0	0	0	0	0
2060	145000	S11	8 142	10 787	2 645	2 488	-156
2060	145000	S14	0	0	0	0	0
2060	151110	S11	26 707	31 572	4 865	5 413	548
2060	151110	S14	25	22	-3	-2	0

Table 5.17: Examples of the calculation of inventories. Inventories of raw materials in DK-NACE industry 050200: fish hatcheries and fish farms, divided by sector. 1000 DKK.

Product N ^o	130-Indust. N ^o	DK-NACE indust.	Sect.	Opening Price index 2003-pr. = 100	Closing Price index 2003-pr. = 100	Opening stock	Closing stock	Change without price-correction	Opening stock, 2003-prices	Closing stock, 2003-prices	Change in national accounts	Price correction
V030100	050000	050200	S11	130.92	88.13	12 171	9 303	-2 868	9 360	10 556	1 196	4 064
V050800	050000	050200	S11	102.67	95.10	57	55	-2	57	58	1	3
V051103	050000	050200	S11	97.33	100.32	36 701	36 841	140	37 703	36 725	-978	-1 118
V051105	050000	050200	S11	104.71	94.14	4 947	4 713	-234	4 936	5 006	70	304
V230903	050000	050200	S11	102.98	100.86	60 677	58 612	-2 065	58 897	58 111	-786	1 279
V271005	050000	050200	S11	90.49	97.16	221	390	169	246	401	155	-14
V271007	050000	050200	S11	98.01	97.07	33	32	-1	33	33	0	1
V271011	050000	050200	S11	95.65	91.27	16	16	0	19	18	-1	-1
V271012	050000	050200	S11	90.65	98.24	67 231	125 715	58 484	74 278	127 971	53 693	-4 791
V271019	050000	050200	S11	99.80	91.70	21	21	0	22	23	1	1
V271021	050000	050200	S11	97.89	100.59	2 193	2 169	-24	2 241	2 156	-85	-61
V271101	050000	050200	S11	86.32	89.43	658	636	-22	768	711	-57	-35
V391704	050000	050200	S11	98.34	98.62	1 020	1 005	-15	1 039	1 019	-20	-5
V391711	050000	050200	S11	99.35	100.45	121	120	-1	123	119	-4	-3
V391713	050000	050200	S11	99.35	100.45	47	47	0	48	47	-1	-1
V391900	050000	050200	S11	99.30	99.58	27	26	-1	27	26	-1	0
V392302	050000	050200	S11	99.72	100.44	8 179	8 084	-95	8 202	8 049	-153	-58
V392304	050000	050200	S11	102.27	96.85	21	20	-1	22	21	-1	0
V560700	050000	050200	S11	98.77	97.27	6 696	6 505	-191	6 790	6 687	-103	88
V560801	050000	050200	S11	102.21	100.45	12 315	11 912	-403	12 045	11 858	-187	216
V560805	050000	050200	S11	102.21	100.45	9	9	0	9	9	0	0
V560900	050000	050200	S11	102.21	100.45	46	44	-2	45	44	-1	1
V611000	050000	050200	S11	99.60	99.89	1 115	1 100	-15	1 118	1 101	-17	-2
V950700	050000	050200	S11	109.35	108.20	1 872	1 818	-54	1 708	1 680	-28	26
	050000	050200	S11			216 394	269 193	52 799	219 736	272 429	52 693	-106

Product NO	130-Indust. No	DK-NACE indust.	Sect.	Opening Price index 2003-0pr = 100	Closing Price index 2003-pr. = 100	Opening stock	Closing stock	Change without price-correction	Opening stock, 2003-prices	Closing stock, 2003-prices	Change in national accounts	Price correction
V030100	050000	050200	S14	130.92	88.13	4 031	2 465	-1 566	3 017	2 797	-220	1 346
V050800	050000	050200	S14	102.67	95.10	19	14	-5	19	15	-4	1
V051103	050000	050200	S14	97.33	100.32	12 155	9 761	-2 394	12 494	9 730	-2 764	-370
V051105	050000	050200	S14	104.71	94.14	1 638	1 249	-389	1 615	1 327	-288	101
V230903	050000	050200	S14	102.98	100.86	20 095	15 530	-4 565	19 538	15 397	-4 141	424
V271005	050000	050200	S14	90.49	97.16	73	103	30	81	106	25	-5
V271007	050000	050200	S14	98.01	97.07	11	9	-2	10	9	-1	1
V271011	050000	050200	S14	95.65	91.27	5	4	-1	5	4	-1	0
V271012	050000	050200	S14	90.65	98.24	22 265	33 309	11 044	24 450	33 907	9 457	-1 587
V271019	050000	050200	S14	99.80	91.70	7	6	-1	8	7	-1	0
V271021	050000	050200	S14	97.89	100.59	726	575	-151	743	572	-171	-20
V271101	050000	050200	S14	86.32	89.43	218	168	-50	249	188	-61	-11
V391704	050000	050200	S14	98.34	98.62	338	266	-72	344	270	-74	-2
V391711	050000	050200	S14	99.35	100.45	40	32	-8	41	32	-9	-1
V391713	050000	050200	S14	99.35	100.45	16	12	-4	16	12	-4	0
V391900	050000	050200	S14	99.30	99.58	9	7	-2	9	7	-2	0
V392302	050000	050200	S14	99.72	100.44	2 709	2 142	-567	2 719	2 133	-586	-19
V392304	050000	050200	S14	102.27	96.85	7	5	-2	7	5	-2	0
V560700	050000	050200	S14	98.77	97.27	2 217	1 724	-493	2 236	1 772	-464	29
V560801	050000	050200	S14	102.21	100.45	4 079	3 156	-923	3 993	3 142	-851	72
V560805	050000	050200	S14	102.21	100.45	3	2	-1	3	2	-1	0
V560900	050000	050200	S14	102.21	100.45	15	12	-3	15	12	-3	0
V611000	050000	050200	S14	99.60	99.89	369	291	-78	370	291	-79	-1
V950700	050000	050200	S14	109.35	108.20	620	482	-138	569	445	-124	14
V030100	050000	050200	S14	130.92	88.13	4 031	2 465	-1 566	3 017	2 797	-220	1 346
	050000	050200	S14			71 665	71 324	-341	72 551	72 182	-369	-28

5.13.5 Calculation of changes in inventories using information on products

Special 2063 inventories are calculated for a small number of national accounts product numbers, all of them agricultural products and including a few pre-processed ones regularly calculated from information on the individual goods (excluding some specific changes in inventories which, by tradition, are entered under MLS code 2064).

Table 5.18 Increases in inventories calculated from information on products

CODE: 1000 DKK	2063 PRODUCT- N°	MLS CODE	Purchasers' prices incl. VAT
Bovine animals, live, other than for breeding	V010203	2063	-213 111
Pigs, live	V010300	2063	8 400
Poultry, especially offal, fresh/refrigerated	V020700	2063	-31 124
Butter and other fats from milk	V040500	2063	9 633
Cheese	V040601	2063	111 401
Wheat, wheat and rye mixed seed	V100100	2063	57 358
Rye	V100200	2063	-35 296
Barley	V100300	2063	-216 866
Oats	V100400	2063	-16 492
Maize	V100500	2063	290
Millet, other grain	V100800	2063	3 316
Mink, beaver, fox and seal fur	V430101	2063	-2 300
Increase in inventories, special products	Total	2063	-324 691

The calculation of 2063 changes in inventories is based on information on inventories in *physical units*, in contrast to the general method which is based on information on the *value* of inventories at industry level.

For those products included in the energy system, changes in inventories are calculated in the Environment and Energy Division in connection with the estimate of energy balances. The starting point here is information from *Energistyrelsen* [the Danish Energy Agency] on volumes and prices of the individual goods. Changes in inventories divided by product are received from the Environment and Energy Division, with no indication as to where in the inventories and industries the changes occur. As for the 2063 changes in inventories, the 2064 changes for energy are based on information on physical quantities.

Table 5.19: Increases in inventories from the energy system

CODE: 1000 DKK	2064 PRODUCT- N°	MLS CODE	Purchasers' prices incl. VAT
Hard coal and hard coal briquettes	V270100	2064	-56 858
Brown coal, lignite	V270200	2064	-113
Coke and semi-coke of coal	V270400	2064	8 573
Petroleum oils and crude oils	V270900	2064	101 477
Kerosene-type jet fuel and medium oil	V271001	2064	-633 210
Aviation spirit and motor spirit	V271005	2064	687 659
Coloured fuel	V271007	2064	-171
Light oil, special spirits	V271009	2064	220 117
Gas-oil, except for processing	V271012	2064	733 326
Fuel oils other than for further processing	V271019	2064	23 914
Fuel oils etc. for processing	V271023	2064	-6 712
Natural gas, propane, butane, etc.	V271101	2064	19 105
Natural gas, high-pressure, export (III)	V271106	2064	45 974
Petroleum coke	V271301	2064	11 385
Bitumen, asphalt, natur. bituminous	V271400	2064	-105 521
Increase in energy inventories	Total	2064	1 049 116

5.13.6 Special changes in inventories - other 2064 inventories

The other 2064 changes in inventories are also compiled for individual goods, but in principle should not be produced on a regular basis as results from national accounts subsystems. It is debatable whether this is the case with all products occurring here. The estimate of some 2064 changes in inventories for ships and railway rolling stock has gradually become an ongoing process. However, more often than not changes in inventories are either introduced with the balancing or their actual figure is not finally fixed until that point, and cannot be worked out from the accounting sources. Some of these changes may, however, occur within inventories covered by the accounts.

Table 5.20: Increases in inventories, other special inventories

CODE: 2064 1000 DKK	PRODUCT- N°	MLS CODE	Purchasers' prices incl. VAT
Raw milk	V040107	2064	-500 000
Beer	V220300	2064	500 000
Difference between Foreign trade and BOP	U000003	2064	1 052 545
Tubes for oil and gas pipelines, seamless	V730601	2064	-400 000
Shavers, knives, blades	V821200	2064	-318 407
Parts for electric motors	V850300	2064	-1 017 075
Electric cells and batteries	V850600	2064	-126 065
Railway carriages, self propelled	V860300	2064	271 938
Motor vehicles, min. 10 persons.	V870200	2064	-96 819
Increase in other special inventories	Total	2064	-633 883

Initially, 2064 changes in inventories are worked out by linkage with the supply and use tables (SUTs) with no breakdown by sector or industry. As regards the institutional accounts, however, a

breakdown by sector is necessary, and these changes in inventories are subsequently broken down (somewhat roughly) by industry and sector.

5.13.7 Relation between changes in inventories calculated based on inventory totals broken down by industry and info. on individual products

Table 5.21 outlines how national accounts changes in inventories are obtained. Since the purpose here is to show where there is a possible overlap between changes calculated from different sources, the aggregate inventory calculations are divided up into 2060-, 2061-, 2062- and 2065- inventories on the one hand and 2063- and 2064- inventories on the other.

Table 5.21 Relation between changes in inventories broken down by industry and information on individual products

Industries Products	Industries where changes in inventories are calculated on the basis of inventories in accounts	Industries where changes in inventories cannot be calculated from inventories in accounts	Changes in inventories by product
Products for which changes in inventories are worked out using a breakdown of changes in inventories in the accounts	These are obtained as the difference between opening and closing stocks as broken down in the accounts, calculated in average prices for the year. There may be 2064-changes in inventories here, in which case there are balancing corrections to the changes in inventories originally calculated.	Only 2063- or 2064- changes in inventories can occur here.	<i>Here, chan. in invent. broken down by product are obtained as the sum of the changes in invent divided over the individual industries + any 2063- and 2064- chang. in invent.</i>
Products for which the aggregate change in inventories is calculated in terms of goods (2063- and 2064-inventories)	These are calculated on the basis of the breakdown of inventories but at the same time are incl. in those changes in inv. which are calc. on the basis of information on goods. To avoid double counting, they are omitted when the aggr. change in invent. is worked out in a breakdown by product. They are, however, incl. in the calc. of the industries' national acco. changes in invent. and the change from business accoun. to national accounts consumption.	This area is covered in full by changes in inventories calculated on the basis of information on goods, even though these are not available in a breakdown by industry. It covers items such as stocks of energy in energy supply and transport industries, which are calculated in A-files.	Total changes in inventories for goods where changes are calculated on the basis of information by good.
Changes in inventories broken down by industry.	Total changes in inventories calculated from inventories in the business accounts plus any additions (2064).	<i>These changes in inventories are included in the totals compiled at goods level with no breakdown by industry.</i>	National accounts aggr. changes in invent..

The first column in the table shows the changes in inventories according to the intermediate system, broken down by good according to the "inventory breakdown system". The national accounts aggregate changes in inventories are obtained as the sum of these changes excluding those goods for which all changes are determined in terms of goods as 2063- or 2064-inventories. Implicitly, the value of the overlap between the two calculations is also estimated in the inventory breakdown system. It is the cells (row 4, column 2) and (row 3, column 4) for which information is available before the start of the balancing.

It is clear that the calculation of the overlap will be somewhat uncertain. The system used for distribution of accounts statistics' inventories by products has some built in "handles" that are used to adjust the changes inside the overlap to the changes that are calculated as 2063- or energy inventory changes while keeping the values of opening and closing stocks equal to their values from accounts statistics. There is, however, also a certain amount of uncertainty about the figures in the accounting statistics which refer to inventories. If the calculated inventory data conflict with other information when the product balances are balanced, it may still in some cases be reasonable to amend the aggregate changes in inventories²⁶.

5.14 Acquisitions less disposals of valuables

Acquisitions less disposals of valuables are estimated from the supply side using the commodity flow method. Table 5.22 shows net acquisitions of valuables divided into those products which were included in this capital accumulation category in 2003.

Table 5.22 Acquisitions less disposals of valuables

Product n ^o	Text	DKK million
V570201	Kelem and similar hand-woven rugs	11
V710206	Diamonds, unfitted	113
V711301	Articles of jewellery of silver	266
V711303	Articles of jewellery of precious metals	419
V711401	Articles of silversmiths' wares	105
V711403	Articles of goldsmiths'/silversmiths' wares of precious metals	11
V711600	Goods of natural pearls/cultured pearls	0
V711700	Imitation jewellery n.e.c.	186
V711800	Coins	4
V970100	Paintings, drawings and pastels, collages etc.	387
V970200	Original engravings, prints or lithographs	160
V970300	Original sculptures or statuary	304
V970600	Antiques of an age exceeding 100 years	-49
Total		1 917

²⁶ The balancing, however, normally complies with the principle that there has to be a counterpart entry to corrections to inventories in other changes in inventories which may reasonably be considered to have taken place within the same enterprise. There are only a few exceptions, most often the introduction of 2064 changes in inventories in the goods in question.

5.15 Exports of goods

Goods accounted for DKK 425 357 million, or 67%, of the DKK 635 114 million total exports of goods and services in 2003.

In the national accounts, exports of goods are based directly on Statistics Denmark's estimates of external trade. External trade statistics are described in greater detail in Section 11.3. The estimates use one method for EU trade (Intrastat) and a different one for trade with non-EU countries (Extrastat).

The statistics have the same geographical coverage as the national accounts and are grossed up to cover all external trade in goods regardless of any administrative threshold values for the reporting of EU trade to the Intrastat system. EU trade not reported is estimated on the basis of the quarterly VAT returns on all EU trade. Therefore the primary statistics do not need to be grossed up for use in the national accounts. The value levels in external trade statistics are f.o.b. for exports and c.i.f. for imports.

Export and import in the external trade statistics only include goods that cross the border. As the criteria in ESA95 is change of ownership, a correction of the external trade figures regarding transactions involving changes of ownership of goods, which do not cross the border, is needed. The settlements statistics from the central bank (Danmarks Nationalbank) is used as basis for an estimation of the value of this correction.

5.16 Exports of services

Exports of services accounted for DKK 209 757 million, or 33%, of the DKK 635 114 million total exports of goods and services in 2003.

The dominant source for the estimate of the services export total is *Danmarks Nationalbank's* settlements statistics, which are based on the mandatory payment returns which all "currency residents", i.e. persons resident according to the *Lov om valutaforhold* [Foreign Currency Act] are obliged to submit. As payments below DKK 100 000 are not reported, and only summary information is reported for payments below DKK 250000 an estimation to fill this gap is included in the settlements statistics.

The *Nationalbank* has ordered the monetary institutions [commercial banks] to collect the information and pass it on to the *Nationalbank*. The information is confidential and is used for statistical purposes only. Since the commercial banks through which settlements are routed ensure that the payment returns are sent to and collected from their customers, the settlements statistics have no noticeable non-response problems. The returns for settlements statistics have to report the purpose to the commercial bank, using a specific code. The rules valid in 2003 for returns to *Danmarks Nationalbank* settlements statistics were published in the *Nationalbank* publications "*Udlandsbetalinger – Formålskoder*", in June 1998, and "*Udlandsbetalinger – Indberetningsforskrifter*" in October 1998.

Resident units which make or receive payments via banks in the rest of the world are likewise obliged to submit payment returns. Compliance is ensured by legislation under which "currency

residents" have to notify the *Nationalbank* when they open accounts in foreign banks etc. It is obvious that this requirement, and the penalties which go with it, increase the *Nationalbank's* chances of monitoring movements.

The statistical challenge arising from the use of settlements statistics for the estimate of *aggregate* exports/imports of services lies in ensuring that the definition of what constitutes an export or an import of services remains consistent with the external trade statistics and national accounts estimates of exports of goods f.o.b. and imports of goods c.i.f. Since the payments in the settlements statistics are coded as goods or services depending on whether transport and other trade-related services are invoiced separately or not, it is clear that the settlements statistics' delimitation of external trade in goods/services will not tally with the national accounts' definitions. When settlements statistics are used for national accounts, therefore, a correction is made to exports and imports of services as estimated in the settlements statistics to account for the trade-related services coded as trade in goods in the settlement statistics.

This correction for trade-related services uses the "correction percentage method", i.e. a correction percentage is used for exports of goods to estimate the related services. The correction percentages are fixed by comparing external trade statistics exports and imports with the settlements statistics' payments for goods, over a fairly long period. The correction percentages used in 2003 were calculated in the late nineties

The breakdown of aggregate exports and imports of services in the national accounts product balances for services uses both the information on kind found in the settlements statistics purpose codes and other statistical sources such as the transport statistics and the account statistics for shipping. VAT statistics are also used - a source which is particularly useful on the exports side, since they contain information on tax-free export sales for each of the most detailed DK-NACE industries. The total values of import end export of services resulting from introducing these sources will differ from the totals calculated directly from the settlement statistics, but the balance of import and export is not changed.

5.17 Imports of goods

Goods accounted for DKK 373 072 million, or 68%, of total imports of goods and services in 2003 (DKK 547 565 million).

Reference should be made to Section 5.15, since sources and methods are the same for imports as for exports of goods, except for procurements, for which the source is the account statistics for shipping.

5.18 Imports of services

Imports of services accounted for DKK 174 494 million, or 32%, of the total imports of goods and services in 2003 (DKK 547 565 million).

Reference should be made to Section 5.16, since the sources and methods are the same for imports as for exports of services.

6. The balancing or integration procedure and validating the estimates

6.0 GDP balancing procedure

6.0.1 Target total module

Before the balancing of GDP can take place in the supply and use tables, so-called target totals for supply and use are compiled. This is done by collecting the information from intermediate system 2 and other systems in the target total module. The codes in the target total module and how they are defined from the intermediate system 2 are shown in table 6.1. The ANVID codes correspond to transaction codes, and are those used in the supply use tables. The interpretation is:

1010:	Domestic turnover (= P.1 Output)
1020:	Imports of goods and services (=P.7)
1021, 1022 and 1023:	Customs and duties on imports (=D.212)
2010:	Intermediate consumption (=P.2)
2030:	Household final consumption expenditure (P.31)
2041:	Government individual consumption expenditure, market (P.31)
2042:	Government individual consumption expend., non-market (P.31)
2043:	Government collective consumption expenditure (P.32)
2051:	Gross fixed capital formation, machinery and transp. equipment (P.511)
2053:	Gross fixed capital formation, buildings and structures (P.511)
2054:	Gross fixed capital formation, breeding stock (P.511)
2055:	Gross fixed capital formation, valuables (P.53)
2056:	Gross fixed capital formation, software (P.512)
2057:	Gross fixed capital formation, artistic originals (P.512)
2058:	Gross fixed capital formation, exploratory drillings (P.512)
206x:	Changes in inventories (P.52)
2081:	Exports of goods and services, Danish production (P.6)
2082:	Exports of goods and services, re-exports (P.6)

Total supply is defined as: $1010+1020+1021+1022+1023$

Total use is defined as: $2010+2030+204x+205x+206x+208x$

Rearranging the variables gives GDP:

$1010-2010=$ GDP from the production side

$2030+204x+205x+206x+208x =$ GDP from the expenditure side

After the balancing, which takes place at the product level (2350 products), the two expressions for GDP equal. It must be noted, that 1010 and 2010 are compiled at the 130 industry level and 2030 at the level of 72 consumption groups and 204x is subdivided into 31 groups according to purpose.

Table 6.1 National accounts target totals - functional system...

ANVID	Intermediate system code	Definition/comment
1010	Domestic turnover	
	= 1003	Output of originals
	+ 1005	Hidden economy output
	+ 1007	Fringe benefits, output
	+ {1008}	{FISIM (financial industries only)}
	+ 1009	Work for processing
	+ 1011	Repair and installation work for others
	+ 1012	Manuf.e of plant and machi. for own use
	+ 1013	Other net sales, own products
	+ 1014	Output for own consumption
	+ 1015	Own account software
	+ 1016	Sales of goods for resale
	- 7019	Consumption of goods for resale
	+ 1017	Income from licenses and royalties
	+ 1018	Other operating income
	+ 1059	Other turnover
	+ 2065	Changes in inventories, finished goods
	+ 2099	Total price correction, goods for resale
1020 *	Imports of goods and services	
1021 *	Customs	
1022 *	Temporary import duty	(Oct. 1971 - March 1973)
1023 *	Agricultural import duties	EAGGF
2010	Intermediate consumption	2011+2018
2011	Input, ex. R+M, IPC and FISIM	
	+ 2009	Interm. cons., total gen. gov. (OIMA)
	+ 2013	Purchases (consumpt.) of fuel and power
	+ 2014	Purchases of work for processing
	+ 2015	Other consumption of raw materials
	- 2098	Total price corr., stocks of raw materials
2018	Input; R+M, IPC an FISIM =	
	+ 7020	Expenditure on rentals, excl. heating
	+ 7021	Renting and leasing of machinery
	+ 7022	Renting and leasing of transport equipm.
	+ 7023	Rent. and leasing of computer equipm.
	+ 7024	Other exp. on renting and leasing
	+ 7025	Expendit. on consumables
	+ 7027	Repair and maintenance; buildings
	+ 7028	Repair and mainten.; other constructions
	+ 7029	Repair and mainten.; transport equipm.
	+ 7030	Repair and mainten.; machinery
	+ 7031	Repair and mainten.; buildi. and constr.
	+ 7032	Rep. and maint.; machi. and transp. equi.
	+ 7035	Rep. and maint.; not specified.
	+ 7040	Contributions to the trade
	+ 7041	Expenditure on licences and royalties
	+ 7042	Other external expenditure incl. in input
	+ 7044	Public fees as purchases of services
	+ 7050	Financial interme. services directly paid
	+ 7051	FISIM
	+ 7055	Insurance (negative) corr. from premiums to services
	+ 7059	IPC corr. when transf. to/from other MLS-codes

Table 6.1 National accounts target totals - functional system, cont. ...

ANVID	Intermediate system code	Definition/comment
2030 *	Household final consumpti. expen.	
2031 *	Consumption, NPIHs	
2041 *	Gov. indiv. consum., market output	
2042 *	Gov. indiv. consum., non-market output	
2043 *	Government collective consumption	
2051	GFCF, machin. and transp. equip.=	
	+ 6131	Purchases of machinery and equipment
	+ 6132	Purchase of cars
	+ 6133	Purchase of other transport equipment
	+ 6134	Purchase of other equipment
	+ 6140 (part of)	Acquisitions, work in progress
	- 6231	Disposals of equipment
	- 6232	Disposals of cars
	- 6233	Disposals of other transport equipment
	- 6234	Disposals of other equipment
2053	Capital formation, build. and struc.=	
	+ 6121 (part of)	Acquisitions, existing buildings
	+ 6123	Construction expenditure, new buildings
	+ 6124	Rebuilding, building improvements, etc.
	+ 6125	New construct. and rebuild. of roads etc.
	+ 6126 (part of)	Acquisitions of other real estate
	+ 6140 (part of)	Acquisitions, work in progress
	- 6221 (part of)	Disposals, existing buildings
	- 6223 (part of)	Disposals, roads harbours etc.
	+ 6321	Acqui. and disp. of exist. build. (gen. gov. (OIMA))
2054	Capital formation, breeding stock=	(relevant for agriculture only)
	+ 6127	Purchases of breeding stock
	- 6227	Sales of breeding stock
2055*	Net purchases of valuables=	
	+ 2055	Net purchases of valuables
2056	Purcha. and own account software=	
	+ 6101	Own account software
	+ 6102	Purchased software
	- 6202	Disposal of software
2057	Entertainment, cultural and artistic originals=	
	+ 6103	Originals, own account and purchased
	+ 6110 (part)	Other acquisitions of intangible assets
	- 6203	Disposals of artistic originals
2058	Exploratory drilling=	
	+ 6104	Exploratory drilling
2060	Changes in invento., raw materials=	
	+ 2060	Changes in inventories of raw materials
2061	Changes in inventories, wholesale=	
	+ 2061	Goods for resale, wholesale
2062	Changes in inventories, retail=	
	+ 2062	Goods for resale, retail 1)
2063*	Changes in inventories=	
	+ 2063	Changes in invent., sources other than account statis.
2064 *	Chang. in inventories=	
	+ 2064	Based on product balancing
2065	Chang. in invent., finished produc.=	
	+ 2065	Finished products
2080 *	Exports of goods and services	2081 + 2082
2081 *	Danish-produced exports	
2082 *	Re-exports	

Notes :

* Indicates that data are not derived from the intermediate system.

1) Compiled using inventory statistics on products, i.e. agricultural products.

When the target totals are compiled, they are subsequently distributed by 2350 products as described in section 6.0.2

6.0.2 Supply and use tables as a framework for balancing

Supply and use tables and the compilation of national accounts

The current system of Supply and Use Tables (SUT) for Denmark was established in the mid-seventies. Since then the calculation of annual SUTs has been a totally integrated part of the compilation of annual National Accounts in both current and constant prices.

The integration of SUT in the compilation of National Accounts implies that a number of NA aggregates are derived directly from the SUT. This in particular relates to all the NA aggregates in the "Goods and services account" and the "production account". The integrated procedure is in contrast to a procedure where SUT are compiled after the production of the NA figures implying a number of restrictions on the totals of the SUT.

In general terms the advantage of having the compilation of SUT as an integral part of the production of national accounts can be formulated as follows:

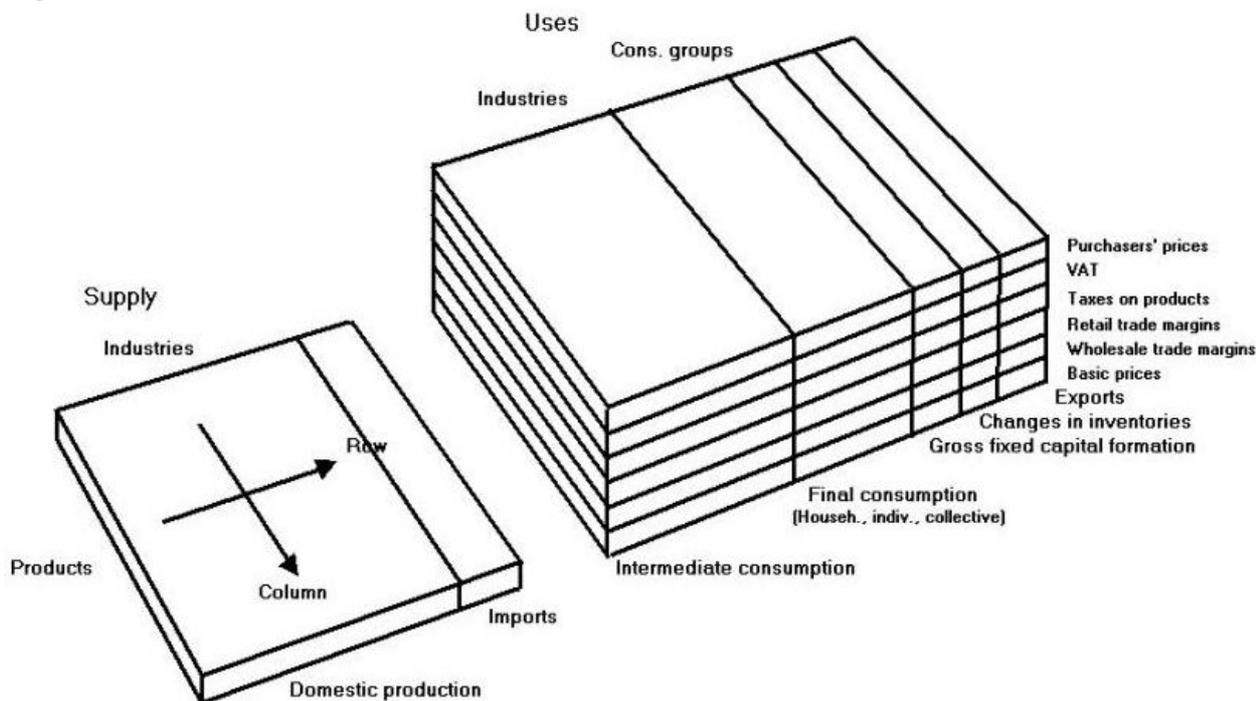
- It is the most efficient way to incorporate all basic data – aggregated or detailed – into the national accounts framework in a systematic way.
- It is an effective way to ensure consistency at a detailed level and thereby improve the overall quality of the national accounts.

The Danish SUT are compiled in connection with the final annual accounts, which are released with a delay of almost three years. The structural information entailed in the SUT for the latest final year is used in the compilation of preliminary annual and quarterly national accounts but no balanced preliminary or quarterly SUT are produced. The description in the following therefore refers to the compilation of the SUT as a part of the final annual national accounts.

The framework of Supply and use tables in Denmark

The principle of the Danish SUT-system is illustrated in figure 6.1. It shows the supply and use of all products and the treatment of the connection between the different value-levels (basic values, purchasers' values). The sub matrices for basic values, trade and transport margins, net taxes on products, non-deductible VAT and purchasers' values are stacked as "layers" to visualise the transformation from basic to purchasers prices for each cell of the system.

Figure 6.1:



Products are shown as rows, categories of use (by industries, consumption groups etc. when relevant) are shown as columns. Notice that what is here referred to as rows and columns consist of the relevant parts of all the “layers” shown in the figure.

As a starting point supply is shown as a matrix of basic values in the left side of the figure. At the right side of the figure the use matrix at basic prices is shown as the bottom "layer". In the balanced commodity flow system total supply at basic prices must equal total uses at basic prices for each product. Trade- and transport margins are here a special case: At the supply side they are shown as output of trade services at basic prices from the industries in which they are produced but they are left out from the basic price level on the uses side. Here they are shown in the margin-matrices where they are distributed together with the basic values to which they are related. The wholesale trade matrix also includes transport margins.

Net taxes on products and non-deductible value added tax are also distributed as matrices uses side.

In the rows and the columns we distinguish between the following groups:

- There are at this moment approximately 2350 products, which consist of approximately 1960 goods and 410 services. For goods the categories are defined as one or more 6-digit Harmonized System groups. There is at least one NA-good for each 4-digit HS-group. A key linking the NA-goods to CPA has been established. For services the categories are in principle based on 4-digit CPA. In some areas 4-digit CPA groups have been subdivided (e.g. in the area of business-services) in others a number of 4-digit CPA groups have been aggregated to the NA-categories (e.g. trade) The NA-categories for services are kept almost constant for a number of years. The key defining the NA-categories for goods are updated annually in order to take account of - normally relatively few - changes in the HS-groups.

- The number of columns for domestic production is 130 reflecting that we distinguish between 130 activity groups. Those groups are based on the official Danish nomenclature for activities, which have direct links to NACE and ISIC. The classification in to activities is based on establishment units (Local-kind-of activity units). In a few cases we have found it important to have more homogeneous branches defined by activity. This applies to agricultural production, construction, trade and motor vehicle repair. Thus for example we combine all trading activity into the activity-defined trade-industries, regardless of the industry in which the activity is classified in the primary statistics.
- The import column is a vector showing import by products. At a later stage we expand it into a matrix including a geographical dimension, but this is not a part of the core SUT-framework.
- Intermediate consumption is broken down by the same 130 industries as domestic production. Until recently the uses side had an extra branch showing the intermediate consumption of FISIM; this branch has disappeared as FISIM is now distributed by uses.
- Final consumption expenditure of households is subdivided onto 72 groups. The classification is based on COICOP. Final consumption expenditure of NPISH forms a separate group.
- Final consumption expenditure of general government is divided into three major groupings, collective consumption expenditure, individual consumption expenditure on services produced by general government and individual consumption expenditure on services produced by market producers but paid by general government and supplied to households - without any transformation – as social transfers in kind. Each of those groups is further subdivided according to main purpose to form in total 31 groups.
- Gross fixed capital formation is subdivided into ten groups according to type of investment good (transport equipment, new buildings etc.). In combination with the product-rows this leads to a diagonalistic structure with very few off-diagonal elements. The justification for this subdivision has to do with practical aspects of our systems for preliminary and quarterly accounts. A separate system distributes each type of GFCF by products and 56 industries.
- Changes in inventories are classified into 6 groups depending on the kind of stocks (for example stocks of raw materials, inventories in wholesale trade etc.)
- Exports are for reasons of deflation divided into two categories, ordinary exports and re-export. At a later stage we expand it into a matrix including a geographical dimension, but this is not a part of the core SUT-framework.

Overview of the balancing process

The process of constructing the SUT for a given year can be summarised into the following steps:

The first step is to gather all the available data on the actual year on target totals and other values that can be entered directly into the system as predetermined.

The next step is to create a complete initial version of the SUT. This version is compiled using automatic processes, but at this stage a number of unsolved problems will remain: For some products supply will not equal uses. For most categories of use the totals will usually differ from their targets. Total trade and transport margins and total VAT may also differ from their respective targets. This step will be referred to as "Automatic balancing".

Then follows a step, where the initial version of the product-balances is adjusted manually. The unsolved problems are examined closely. In many cases such problems will reveal errors in the calculations that produce data-input to the product-balances or in the primary statistics itself. Solutions to such problems may be found in co-operation with the relevant sections of the statistical bureau and may involve changes in supply, predetermined uses or target-totals. A number of products are redistributed between uses to bring the distance between totals and targets within an acceptable range for each category of use. Corrections to the initial balances are entered into the system to create a new - but not yet final - version. This step will be referred to as "Manual balancing"

In the last step the differences between totals and targets are removed except where such differences are considered acceptable. In this step trade and transport margins and VAT are finally adjusted to their targets. This step will be referred to as "Final balancing".

Incorporation of available data on the actual year

In a number of subsystems all available data are prepared by suitable corrections before they are incorporated into the SUT-framework. The available data for a given year is never complete in the sense that it enables us to fill out the full supply and use tables. However it offers – as briefly described below – a sufficiently restrictive frame for the values in the system in order to fill out the complete SUT in a reliable way.

In general terms a short description of the data that on an annual basis is incorporated directly into the SUT-framework would be:

On the supply-side (cf. fig. 1) the available data allows us to fill out the complete supply matrix annually. Data from the agricultural accounts, accounting statistics (from the Structural Business Statistics) and the General government accounts makes it possible to calculate total output in basic values (column totals for industries in fig.1) for almost all industries. Only for a few branches (financial intermediation) separate calculations have to be made.

The distribution of the total output of industries on products is for agriculture and general government derived directly from the primary statistics. For manufacturing the output-totals are combined with the Prodcom statistics to calculate the product distribution. Information on the product-distribution in the service area is somewhat scarcer. For some service industries we have annual information on the output by products, for example transport and IT-industries. For others we might rely on older ad-hoc information on the product distribution. In some cases where it seems reasonable and we have no other information we assume equality between output of a given service industry and the characteristic product. For example we assume that the output of architects consists of architectural services and the output of hairdressers consists of hairdressing. When this assumption is used it is done at the most detailed industry-level (in total 800 industries).

The total and product-distribution of the import column is directly available from the foreign trade (goods) and balance of payments (services) statistics.

On the uses side we have less abundant information, usually only for column totals. Except for final consumption expenditure of general government, exports and change in inventories we only have scattered and often irregular information about the use in a given category distributed by products.

For intermediate consumption by industry the total values in purchasers' prices are extracted from the same sources used for the calculation of total output.

The totals at purchasers' prices for each of the 72 groups of final consumption expenditure of households are estimated using a variety of sources, most important information on the value of retail turnover to households and the household budget surveys. Data on final consumption expenditure of general government are available directly from the statistics on general government accounts both for the 31 totals and distributed by products.

The subsystem for the estimation of the totals at purchasers' prices for the ten different groups of gross fixed capital formation is rather comprehensive. The accounting statistics together with information on new established firms gives us for each industry a grand total for gross fixed capital formation. Together with information on the total domestic supply of some investment goods (transport equipment, construction, breeding stocks a.o.) the totals at purchasers' values for each of the ten groups can be estimated.

Changes in inventories pose a special problem, first of all because it would be nonsense to assume a distribution by products proportional to the preceding year. Secondly a residual calculation of the change in inventories of each product using the definition that supply equals demand at basic prices is refused in part because we think we can make more reliable estimates but most importantly because this would eliminate the use of the identity between supply and use as a tool for evaluating all the other estimates.

In some cases we have available data on stocks of specific products, notably agricultural and energy products, but the usual data input is information on the value of opening and closing stocks in each industry. These stocks are then distributed by products based on particular assumptions. For example inventories of raw materials in a given industry will be distributed proportional to the intermediate consumption of goods in that branch. Stocks in a given trade branch will be distributed proportional to the supply of goods typically traded in that trade branch. The changes in inventories are then calculated for each product using the usual price-correction-technique. The result is a column for changes in inventories distributed by products (at purchasers' values) that might be attached a reasonable amount of plausibility.

The total and product-distribution of the export columns (at purchasers' values) are directly available from the foreign trade (goods) and balance of payments (services) statistics.

As it has been seen most column totals will be calculated at the level of purchasers' prices. We have however some subsystems that calculate column totals for other value-levels as well. For example we make calculations for the column total of retail trade margins for some consumption groups. This implies that for those groups we have column totals for two (or more) value levels.

On the use side we also have some subsystems that annually determines parts of the use-matrices. For instance we have subsystems for repair and maintenance of buildings and other construction and a subsystem for energy products. These subsystems determine the complete rows for these products on the use side at all value levels.

Other subsystems determine individual cells or a number of cells on the use side. This includes gross fixed capital formation in construction, railroad rolling stock, ships and airplanes and a few other areas. For a given year there might be ad hoc information in certain areas that is considered suitable enough in order to enter as predetermined.

Furthermore we have subsystems that calculate the total (accrued) net taxes on each product (row totals in the matrix taxes on products) and the grand total of the (accrued) non-deductible VAT based on statistics for General Government.

The above description covers data that are considered to be reliable enough to be classified as predetermined. This means that it will not be changed in the process of automatic balancing but only can be changed later according to a manual decision. It follows from these considerations that there are other information – usually less reliable – that are used in the SUT-framework. This is described in the section on automatic balancing.

The calculations results in coverage of the following parts of the SUT-framework cf. figure 1:

- A complete supply matrix
- Target column totals for all uses at purchasers' values
- Distribution on the use side by products of the columns for exports and changes in inventories at purchasers' values and of the columns for final consumption expenditure of general government at all value levels.
- Full specification for certain products (rows) at all value levels on the use side.
- Specification of certain cells or groups of cells on the use side.
- Total value of net taxes on products by product (Row totals for the matrix "Taxes on products").
- Grand total for the VAT-matrix.
- Furthermore the logic of the framework offers the following general information:
- Total use of products at basic values (row totals for the use part of the basic value matrix) being identical to the total supply of the product. Although this is a simple feature of the system it is probably the most important feature and highly useful in ensuring the overall quality of the national accounts.
- Grand total for the wholesale trade matrix being equal to the output of the wholesale branch.
- Grand total for the retail trade matrix being equal to the output of the retail branch.

Initial automatic balancing procedures.

Starting point

The data described in the previous section is directly incorporated in the SUT-framework. It is as mentioned treated as predetermined values which means that it will not be changed in the process of automatic balancing but only can be changed later according to a manual decision.

Before any balancing or distributive procedures can begin we have to have some plausible figures in all relevant cells on the use side. A standard default solution is here to use inflated values and relations from the balanced SUT of the preceding year. In the absence of better knowledge we assume that product structures at basic values and corrected for price movements are constant. This is the same as assuming that the product-structure in a given column at constant prices is unchanged. Further on we assume that trade margin percentages, percentages of taxes on products and VAT are constant over time or at least are moving in the same direction in a proportional way.

However there are a number of cases where we feel we have better information about the product structure than the standard information from updated last-years-structures. This kind of information is not considered reliable enough or suitable to enter directly as predetermined values but still to have informative value.

An example on this kind of data is the survey on raw materials in manufacturing. Another is in gross fixed capital formation where the system described in the annex also offers a first bid on the product-structure for those cells which are not predetermined. A third example is corrections to the matrices on taxes on products and VAT in order to take account of changes in tax rates and systems.

In addition information from numerous ad hoc investigations have over the years been incorporated in the SUT-framework in this way. This can for example be investigations by the Anti Trust Authorities on the cost structure in particular industries, investigations by Statistics Denmark on building cost structure in relation to a new index for building costs, output of advertising services distributed by customers etc. The list is very long.

As mentioned above all these kinds of data replace the standard information from updated previous-years-structures. Since, however, they are not deemed predetermined they will be changed during the automatically balancing procedures described below.

Column adjustments. "Vertical distribution"

The procedures described in the previous section give us a starting point for the automatic balancing procedures. The matrices will at this point be unbalanced in the sense that total use will not equal total supply at basic values for most products, and the sum of the values in a given column will not equal the calculated target column total.

A first step towards a balanced system is adjustment of the values in the columns so they add up to the target column totals. For most uses targets exist only for totals at purchasers' values, in the full system targets may exist for other levels as well. Trade margins used in certain consumption groups can be an example.

The adjustments are made simultaneously at all price levels without changing any predetermined values. To adjust the values in a column, all non-predetermined purchasers' values are multiplied by:

$$\begin{aligned} & \text{(target column total - sum of predetermined values)} \\ & \text{divided by} \\ & \text{(sum of starting values - sum of predetermined values)}. \end{aligned}$$

In the simple case, with a target for purchasers' values only, the same correction-factor are be used

for non-predetermined values in all levels. If targets exist for other levels, the situation is somewhat more complex and there is a need for general corrections to trade margin percentages and/or tax-percentages used in the column. All these problems are solved automatically.

Some restrictions are put on the automatic adjustments to avoid creation of strange values. Automatic changes of sign are not allowed. The appearance of negative basic and purchasers' values are restricted to certain products that may be negative private consumption or disinvestments (examples: scrap, ships, cars) and uses (example: changes in inventories) unless the negative values are entered as predetermined. When both positive and negative uses are present in the same column the results of proportional adjustments can be unpredictable. In such cases we enter all negative uses as predetermined values. The programming ensures that warnings are issued when problems of this kind are encountered.

It follows that automatic adjustment will in certain cases fail to equal column totals to targets. In these cases the columns are written to a list of unsolved problems.

After "vertical balancing" we have a set of columns that (with the exception of the problematic columns mentioned above) represent an initial breakdown of the target value for purchasers' values into products using the initial assumptions about product structure from the starting values. Since all levels are adjusted simultaneously we have also a breakdown of all purchasers' values into the levels from basic prices to VAT.

Total use at basic values of each product will only equal supply in special cases as a result of predetermined values or by pure coincidence. Likewise the sum of the values in the other value levels will usually differ from their target values.

Row adjustments. "Horizontal distribution"

The next step towards balanced system is an adjustment of the values in the rows on the use side to the target totals in the rows.

The procedure starts by adjusting the level of basic values, and the adjustments are again made without changing the predetermined values at basic prices. These include basic values in cells with predetermined purchasers' values to avoid either distortion to trade margin percentages or changes to the original predetermined purchasers' values of these cells. All the non-predetermined basic values in a row (product) are multiplied by

$$\begin{aligned} & \text{(supply at basic prices - sum of predetermined values)} \\ & \text{divided by} \\ & \text{(sum of basic values from the "vertical distr." - sum of predetermined values)} \end{aligned}$$

and in these uses non-predetermined margins and taxes on products are changed by the same factor.

In the matrix for net taxes on products the non-predetermined values are then adjusted to the target row totals and finally the non-deductible VAT is recalculated to reflect the adjustments in the other levels.

Like in the vertical balancing procedure the computer-program is able to trap adjustments that

would lead to strange and incredible values. For the same reasons as mentioned above the automatic balancing will fail to equal supply and use for a number of products. Typically supply is insufficient to cover the predetermined uses of the product. The rows that are left unbalanced in one or more levels can - like the unbalanced columns - be written to a list of unsolved problems.

The use table that is the result of the horizontal balancing procedure will (except for the unbalanced products mentioned above) fulfil the requirement that for every product total use must equal total supply at basic values and that net taxes on products should equal their target row totals.

However the sum of the values in a given column will usually differ from the target column total. Further on the sum of all trade and transport margins on the uses side will be different from the output of the trade industries and the sum of VAT will differ from the calculated total.

Automatic balancing as a repeated process.

For illustrative purposes the description of vertical and horizontal balancing has here treated the automatic balancing as two separate processes. In reality the whole procedure is handled by a single job that uses a few minutes on a modern PC (with a master file of approximately 50.000 records. Preparation of the data-inputs for the process is far more time-consuming). Every time the job is run, new listings of unsolved problems and resulting totals are produced.

When run for the first time with data for a new year a number of serious problems in the data-inputs will usually be revealed. Often problems can be traced back to errors and inconsistencies in data from the statistical sources. Some of these will need to be corrected because they will otherwise cause major distortions in the initial balances.

Before the system is ready for manual balancing the totals of trade and transport margins and non-deductible VAT should be brought within acceptable distance from their respective targets. Adjustments to total trade and transport margins are done by proportional adjustments to all trade margin percentages of the starting file before the vertical/horizontal balancing except in cells with predetermined trade and transport margins. If total VAT cannot be brought within acceptable limits by small adjustments to rates and assumptions used in the calculations, VAT may be left unbalanced at this stage. A search for a specific explanation of the difference may be more appropriate in this case.

In principle the vertical-horizontal balancing procedure could be repeated in an iterative manner, where each new iteration would use the result from the preceding as the starting point. In this early stage, where many problems are unsolved, this could however be a dangerous method and is therefore not used. Repeating the automatic balancing procedure from the initial starting point with specific corrections to the data inputs should not be mixed up with the iterative RAS-procedure.

Manual balancing

The unbalanced SUT resulting from the automatic balancing procedures is now transferred to the process of manual balancing. This task is conducted by 4 to 6 persons (balancers) within a month. Each person is responsible for an area of the economy. Such areas consist of a complex of industries and categories of final use with a high degree of interaction and their common products on either the uses- or production side. On the other hand all products and categories of use must belong to a complex to ensure, that they all are looked after by a responsible person.

The tasks of each balancer are the following:

- Eliminate still existing differences between supply and use of products at basic prices. These differences can have various explanations. As mentioned earlier, serious problems may reveal a need to correct data from primary statistics. However, many remaining differences may be explained by differences in the coding of the same kind of products between production- and foreign trade- statistics, and the problem can then be solved by moving output, im- or exports from one product to another.
- To check the credibility of the results from the automatic balancing.
- To redistribute products between uses until the sum of values in a column are inside an acceptable distance from their targets.
- To evaluate whether the results indicates needs for adjustment of the target column totals. The target-values will usually not be equally well founded on statistical sources. The less well-founded target column totals might be reconsidered in the light of the additional information obtained from the SUT-framework.

To keep the system manageable certain rules are to be followed. One of these is that all products are kept balanced with total uses = supply during the balancing process. This also applies to net taxes on products other than VAT. Another rule is that even though balancers are allowed to make corrections outside their "own" area they must ensure that major changes outside one's own complex are always negotiated with the "owners" of the other complexes involved, and that information is passed between the relevant persons.

Yet another important aspect of the manual balancing procedures is the need for documentation. Many corrections entered by the "balancers" will be independently motivated with references to statistical and other available sources or with common-sense considerations. It is important that the considerations behind the solutions are visible to other "balancers" and that the solutions can be reproduced, when the same problems are encountered in following years. These comments are entered directly in the spreadsheets where the adjustments are made.

The "balancers" use spreadsheets as an interface to a master file containing the SUT-tables. The master file is placed on a network server and is shared by all "balancers". Procedures for extracting data from master-file to spreadsheet and transferring corrections from spreadsheet to the updated master-file are available as macros called from toolbars in the spreadsheet environment.

When updating the shared master-file it is important, that no invalid data are allowed as corrections. All corrections are tested for errors before they are accepted. Corrections to the cells need not necessarily be specified for all levels from basic- to purchasers' prices by the "balancers". The software used to update the master-file will carry out the calculation of the missing values from default assumptions such as preservation of the trade margin percentages and recalculation of VAT using the same rules as in the original master file.

In the process the "balancers" need access to updated information on the state of the system like remaining differences between supply and uses at basic prices by product and the actual distances

between column-totals and their targets. This information is obtained via the macros in the spreadsheet environment. It is also possible to extract information from the master-files of previous years for comparison purposes and to merge data covering several years into spreadsheets as time series.

Final balancing

When all manual corrections have been made, the sum of values in a given column will usually still differ from (the final version of) the target column totals. However such differences will be small for uses whose targets are considered to be based on reliable statistics. Furthermore there will be small differences between the grand totals of the trade margin matrices and their respective target values as well as a difference between the VAT-total and its target.

The first step in the final balancing procedures is to adjust the trade margin matrices to their targets by proportional adjustments of non-predetermined margins and recalculate VAT based on the adjusted values.

This will result in new – but still small – differences between the sum of values in a given column and the corresponding target column total. We now divide the target column totals into two groups: Those that are binding and those where small deviations can be accepted. This division of course reflect to a large degree the statistical sources and the reliability thereof. In our case the target totals where small deviations can be accepted are usually to be found for a number of groups of private consumption expenditure, certain groups of gross fixed capital formation and a few groups of intermediate consumption.

The second step in the final balancing is then to distribute the differences between the sum of column values and their binding targets. The cells that can participate in these corrections without causing inconsistencies in the system can be isolated. The corrections are made at the basic values and create new (small) differences between supply and uses for many products.

These differences are removed in the third step by a new horizontal distribution among the uses without binding targets. In this process trade and transport margins by products are not allowed to change and changes to margin percentages should be kept to a minimum. If these calculations should result in significant distortions the program issues warnings. Some manual adjustments may still be needed where too little value can be moved without creating significant distortions.

The total of non-deductible VAT that is a result of the balancing procedure cannot be expected to exactly match the target that is based on government accounts. It may be preferred to proportionally adjust VAT in specific columns, where the exact share of VAT-liable use is uncertain. A final proportional adjustment of VAT on all private consumption is used to eliminate the remaining difference.

Further automation?

The use of automatic procedures in the balancing of the Danish SUTs has by tradition been limited almost to the minimum needed to manage the amount of detailed data in the system. We have been rather sceptical to proposals to replace manual balancing by an automatic algorithm of some kind. It was mentioned earlier that even though it is possible to proceed in a RAS-like manner when the initial version of the SUT is created, it has been considered dangerous to do so. The initial data

inputs usually contain errors and inconsistencies that are revealed during the manual balancing. Further automatic balancing could introduce significant distortions in the system if performed at this early stage. In the final balancing the situation is of course different, as it must be assumed that errors and inconsistencies have been removed before it takes place.

Recently the Danish SUT's for the years from 1990 to 2000 were revised as part of a general data-revision published in July 2005. This meant balancing 11 years with revised targets and revisions of many predetermined values. While the revisions were small for agriculture, extraction of oil/natural gas and manufacturing, some service industries and parts of general government showed significant changes. To avoid an unnecessarily time consuming manual balancing, the redistribution of inputs between these industries was performed by a technique similar to the RAS-like procedure mentioned above, but the automatic corrections were limited to the relevant areas at the uses side, and they were of course subject to the usual restrictions i.e. predetermined values, VAT-rules and the like. It should also be mentioned that information on the input structure of these industries had always been scarce, as they had not been covered by surveys of the use of raw materials or services. The corrections generated by the automatic procedure were never entered into the shared SUT-files unless they had been found acceptable. The experience was however that the time series produced by this exercise had a nicer look than the old series. They also seemed more plausible than the results from a manual balancing where adjustments would have had to be kept within a limited number of products with significant values.

Software

Historically programs used in the Danish final national accounts have been written in 3.generation languages as Cobol, Fortran or Pascal as well as some in-house products used on a mainframe that is now being phased out. The programs used for preparation of data inputs to SUTs have now been rewritten in SAS. Programs that need to make many "intelligent" decisions are still written in 3.generation languages, mostly Pascal. Today the Pascal programs are compiled using a Delphi compiler. Such programs are used for setting up the initial version of the SUT and for any kind of automatic balancing used during the final balancing step.

As mentioned above the system used for manual balancing uses Excel as the user interface. Visual basic macros are here used to find the relevant filenames, to export and import data, to format imported data and to call the (very fast) Pascal (Delphi-) programs that do most of the calculation work. As a typical Danish SUT file has approximately 50.000 records, the speed of calculation is not without importance for programs that are executed hundreds of times a day.

6.0.3 Size of balancing adjustments

As described in the previous section, the balancing of GDP from the production side, GDP(P), and GDP from the expenditure side, GDP(E), takes place in an integrated supply-use framework.

Once the initial target totals are compiled and the balancing takes place one can in principle distinguish the balancing adjustments. However, in practice, it is necessary to draw the line between the different steps in the compilation process in order to delimit what exactly is balancing adjustments. This is because the compilation is a process of many minor steps, and sometimes it is

necessary to make corrections that relate to earlier steps during the balancing procedure if errors are detected at this stage.

The process table is a tool, which aims at distinguishing between different elements in the compilation and balancing process. In particular, when compiling the process table, all adjustments should be allocated to the proper category regardless whether they are found during the balancing process. This implies that any errors found in the underlying data during the manual balancing process should be allocated to data validation and not balancing adjustment. Therefore, balancing adjustments in the process table in principle shows pure balancing, i.e. pure differences between GDP(P) and GDP(E).

Table 6.2 shows an extract from the process table for 2003. Appendix 9 shows the full process table. Table 6.2 shows that the balancing accounts for +0,1 percent on GDP(P) and -1,6% on GDP(E). On the other hand, data validation accounts for -3,4% on GDP(P) and 0,0 % on GDP(E).

Table 6.2: Compilation of GDP, extract from the process table. 2003.

	Basis for NA figures	Conceptual and other adjustments	Data validation	GDP before balancing	Balancing adjustments	Balanced GDP
Mill. DKK						
GDP(P)	1.405.153	41.250	-47.388	1.399.015	1.680	1.400.694
GDP(E)	1.392.014	31.125	-130	1.423.009	-22.319	1.400.690
% of GDP						
GDP(P)	100,3	3,0	-3,4	99,9	0,1	100,0
GDP(E)	99,4	2,2	0,0	101,6	-1,6	100,0

Note: The difference between balanced GDP(P) and GDP(E) is purely due to rounding errors in the process table.

GDP from the income side, GDP(I), is not described in the process table, because it is not an integrated part of the balancing in the supply-use framework. It is therefore not relevant to show GDP(I) before balancing and balanced GDP(I) in this context.

6.1 Other approaches used to validate GDP

Apart from all the checks that take place as part of the balancing in the supply use framework, source data, which are generally received electronically and at a detailed level, are always compared at the aggregate level with published figures. If there are any differences, a clarification is made and the error is corrected. When and if new data sources occur they are always assessed before being introduced to the national accounts.

Validation of compilation methods and compilation systems are usually made in connection with major revisions or, if necessary, if changes in source data necessitates changes.

7. Overview of the allowances for exhaustiveness

7.0 Explicit allowances

Table 7.1 shows explicit allowances for exhaustiveness in the Danish national accounts. The explicit allowances account for 33.9 bill. DKK or 2.4 percent in 2003.

Table 7.1 Explicit allowances in the national accounts, 2003

Explicit allowances	Value, DKK mill.	% of GDP
Farmers' output for own consumption etc.	196	0.01
Own-account production of software and large databases	11 876	0.85
Output of entertainment etc. originals	1 507	0.11
Fringe benefits for employees	9 645	0.69
Hidden activity, underreporting and the corresponding VAT fraud	10 650	0.76
Total	33 874	2.42
GDP	1 400 689	100

In addition to this, an allowance for illegal activity is made to GNI for own resource purposes as described in chapter 7.0.6 and chapter 8. Illegal activity accounts for 2.7 bill. DKK in 2003.

Implicit allowances are described in chapter 7.1.

7.0.1 Allowances for farmers' output for own consumption etc.

Values for farmers' output for own consumption etc. are available from agricultural statistics and are assumed to cover farm-gate sales as well, most of which presumably come under the black economy. The values are based on agricultural selling prices for the products concerned, i.e. they are at basic prices, as required by the ESA 95. Table 7.2 shows these products and their uses by consumption groups.

Table 7.2 Allowances for farmers' consumption of own products, 2003

Product No	Text	Use	Consump. grp.	Value, DKK mill.
E020100	Cattle for own consumption	Household consumption	1120	12
E020301	Pigs for own consumption	Household consumption	1120	122
E040107	Raw milk for own consumption	Household consumption	1142	25
E040700	Eggs for own consumption	Household consumption	1141	37
Total				196

7.0.2 Own account software and large databases

The sources and methods used for this calculation were described in detail in Chapter 5.

7.0.3 Output of entertainment, literary or artistic originals

The sources and methods used to estimate the value of originals were discussed in Section 5.11.4. Statistics on culture give information on, for example, the royalties/copyrights which certain organisations such as KODA and GRAMEX demand from users and pass on to the artists who hold the copyrights. For loans from libraries, the authors receive "public lending right fee", which is also similar to royalties. The output of artistic originals is divided by product as shown in Table 7.3. Total output is allocated to gross fixed capital formation.

Table 7.3 Allowances for entertainment, literary or artistic originals, 2003.

Product No	Text	Use	Value, DKK million
U920011	Originals – "public lending right fee"	Gross fixed capital formation	134
U920012	Originals – publishing contracts	Gross fixed capital formation	344
U920013	Originals – KODA	Gross fixed capital formation	309
U920014	Originals – NCB	Gross fixed capital formation	113
U920015	Originals – COPY-DAN	Gross fixed capital formation	446
U920016	Originals – GRAMEX	Gross fixed capital formation	104
U920017	Originals – licence payments from the rest of the world	Gross fixed capital formation	57
Total			1 507

7.0.4 Fringe benefits for employees

For 2003, allowances are imputed for payments in kind to employees (fringe benefits) covering the following seven products:

- 8) free cars
- 9) free telephone
- 10) canteen subsidies
- 11) free housing
- 12) free travel
- 13) free newspaper
- 14) free pc

In 2003, the total amount was DKK 9 645 million. Of these seven goods, free cars and subsidies to canteens are by far the most important, accounting for DKK 3 793 million and 4 245 million respectively.

The value of *free cars* is taxable and as from income year 1994 has been reported by employers on the salary information forms, together with wages and salaries in cash. The value is estimated in terms of standard rates which reflect realistic market prices, such as the rental payments for a similar car if it was leased with a service agreement plus fuel costs etc. The tax authorities calculate the taxable value as 25 % of the price of the car. In the national accounts we use instead 23 %. One might legitimately wonder how these rates can claim to be market rates when it is generally considered to be a great financial advantage for individuals to have a company car instead of a normal private car. The answer is simple. Earnings in the form of fringe benefits are taxed on the basis of the value of consumption, whereas earnings in cash are taxed on the basis of income and not the post-tax consumption potential which corresponds to that income – i.e. a much greater amount for the same consumption potential. Even with a realistic assessment of the value of fringe benefits, this asymmetry in the tax system means that, all other things being equal, there is a great advantage in receiving wages or salaries in kind rather than in cash if the goods in question are ones which would have been acquired anyway.

In the national accounts, the tax values are used for the value of free cars, as reported on the information forms to the tax authorities.

The value of *free telephones* is likewise reported on the information forms to the tax authorities in terms of standard rates which are a realistic reflection of market prices. In recent years broadband connections have become more widespread. As these are a part of free telephones and because there is a limit (DKK 3000) on the taxable value, we introduce a mark-up of 20 % on the values reported on the information forms in order to properly reflect the value of free telephones. In 2003, the total value of free telephones was DKK 466 million.

The value of *canteen subsidies* is not taxable income provided that the employees pay a minimum price for a meal which (more or less) covers the costs of the raw materials. The value of the employer subsidy for the running of canteens is consequently not reported to the tax authorities. The source for the national accounts estimate is a benchmark based on a survey from 1994. The 1994-values are inflated with the price index for the canteen industry as well as the growth in total employment.

The value of *free housing* is reported on the information forms in terms of standard rates which are a realistic reflection of market prices. As for cars, it is the values for tax purposes which are used in the national accounts. In 2003, the total value of free housing was DKK 155 million.

The value of *free travel* includes both free travel for employees in the transport sector and the bonus points earned on business travel and missions etc. which employers generally allow their employees to use for private purposes. In principle, free travel is taxable income, but it does not need to be reported separately on the information forms. It may be assumed that this income in kind essentially avoids tax. The national accounts do not therefore use tax statistics as the source for the estimate but a price x quantity calculation. The price of free travel is based on the price of an air ticket with the same restrictions as apply to the free journeys. In 2003, the estimated value was DKK 180 million.

The value of *free newspapers* is based on a survey from 1998 indicating the number of employees who have newspapers paid for by their employer. The value of a free newspaper is calculated as the average price of a one year subscription of a major newspaper (11 newspapers are included). The total value of free newspapers was DKK 359 million in 2003.

The value of *free pc* is not reported on the information forms. Instead we use information on the rise in the number of households having access to a pc at home. We assume that half of the increase can be attributed to pc's paid for by the employer. For the year 2003 and forwards the tax authorities make their own assessment on the number of home pc's paid for by an employer. In 2003 and onward we therefore use the average of the two numbers as an estimate of the number of new home pc's paid for by an employer. The price of the pc's paid for is assumed to reflect the market price for a new pc. Furthermore we set the amortisation of a pc to three years. The total value of *free pc* in 2003 was DKK 447 million

Table 7.4 shows the breakdown of wages and salaries in kind (fringe benefits) over the national accounts' 130 industries. As might be expected, fringe benefits are particularly common within the market service industries and more particularly in wholesaling, where company cars are widely used. Only in a few cases do the many zeros in the table indicate a genuine zero in the cells in question. They usually mean that the values are under DKK 500 000.

Table 7.4 Wages and salaries in kind divided over the national accounts' 130 industries

Industry	Car	Telephone	Canteen	Housing	Travel	News-papers	Pc	Total
(130)	DKK million							
011009	5	1	6	31	0	1	2	47
011209	4	0	3	1	0	0	1	10
014001	3	1	7	1	0	0	1	12
020000	2	1	1	6	0	1	0	10
050000	3	0	1	2	0	0	1	8
110000	12	3	3	7	0	2	1	29
140009	6	0	6	0	0	0	0	13
151000	22	3	60	0	0	2	3	91
152000	4	1	17	0	0	0	0	23
153000	7	1	8	0	0	1	0	16
154000	2	0	3	0	0	0	0	6
155000	12	2	30	0	0	2	1	48
156009	35	3	25	0	0	2	1	67
158109	12	1	11	0	0	1	1	26
158120	2	0	21	1	0	0	0	24
158300	2	0	4	0	0	0	0	7
159000	18	2	18	1	0	1	1	41
160000	6	0	4	0	0	0	0	12
170000	16	1	30	1	0	1	1	50
180000	11	1	23	0	0	1	0	36
190000	2	0	5	0	0	0	0	8
200000	20	2	31	0	0	2	1	56
210000	22	2	28	0	0	2	2	56
221200	16	5	26	0	0	5	2	54
221309	30	5	23	1	1	4	3	67
222009	45	4	40	0	0	3	3	96
230000	4	1	3	1	0	1	1	10
241109	2	0	1	0	0	0	0	4
241209	6	1	11	0	0	1	1	20
241500	1	0	3	0	0	0	0	4
241617	1	0	2	0	0	0	0	3
242000	2	0	3	0	0	0	0	5
243000	9	1	8	0	0	1	1	20

244000	33	5	22	2	4	4	6	77
245070	16	2	15	0	0	1	2	37
251122	23	2	29	0	0	2	1	57
252300	4	0	4	0	0	0	0	9
252400	22	2	17	0	0	2	1	44
261126	6	0	12	0	0	0	0	19
263053	4	0	5	0	0	0	0	10
266080	22	3	28	0	0	2	1	57
271000	0	0	6	0	0	0	0	6
272030	5	1	11	0	0	0	0	17
274000	3	0	8	0	0	0	0	13
275000	2	0	1	0	0	0	0	4
281009	46	4	48	1	1	3	2	103
286009	37	3	42	0	0	2	1	86
291000	18	3	47	0	1	2	3	75
292000	41	5	51	1	1	4	3	105
293000	7	1	17	0	0	1	1	27
294009	34	4	45	0	1	3	3	89
297000	5	0	19	0	0	0	1	26
300000	4	1	9	0	0	0	0	14
310000	34	6	34	0	0	4	5	85
320000	13	2	29	0	1	1	2	47
330000	36	4	37	1	1	3	4	86
340000	6	0	19	0	0	0	1	27
351000	4	1	35	0	1	1	2	42
352050	3	0	6	0	0	0	1	11
361000	34	3	57	1	1	2	3	101
362060	14	1	20	0	0	1	1	37
370000	1	0	1	0	0	0	0	3
401000	12	1	33	0	0	1	2	49
402000	6	1	5	0	0	0	0	12
403000	1	1	6	0	0	0	1	9
410000	0	0	4	0	0	0	1	6
450001	82	8	51	2	1	6	3	153
450002	124	12	70	3	1	9	5	224
450003	29	3	41	1	4	2	3	83
450004	0	0	0	0	0	0	0	0
501009	123	8	20	1	1	6	2	163
502000	22	2	42	1	2	2	2	72
505000	0	0	1	0	0	0	0	1
510000	1.142	90	351	11	21	69	23	1.708
521090	40	2	78	1	1	2	4	128
522990	17	1	26	0	1	0	1	46
523000	5	0	8	0	0	0	0	14
524190	24	1	20	0	0	1	1	49
524490	88	9	61	2	3	7	4	173
551009	9	1	23	1	0	1	0	36
553009	22	3	59	2	0	2	2	91
601000	1	0	51	0	0	0	1	54
602100	3	1	45	0	0	1	1	51
602223	1	0	13	0	0	0	1	15
602409	30	3	67	1	1	3	2	107
610000	25	4	37	3	4	3	1	77
620000	7	2	30	0	26	2	2	70
631130	22	4	35	0	25	3	10	99

634000	65	9	24	1	13	7	7	126
640000	85	36	101	1	11	28	38	299
651000	45	7	96	7	0	6	42	203
652000	51	5	31	2	0	4	10	103
660102	4	1	15	0	0	1	2	23
660300	40	7	30	3	0	5	12	97
670000	21	3	33	1	0	2	18	77
701109	29	3	13	2	1	2	2	53
702009	15	5	25	6	0	4	3	58
702040	24	1	17	2	0	1	1	47
710000	32	2	36	0	4	2	9	85
721009	32	5	18	0	3	4	10	72
722000	139	21	29	3	4	16	47	258
730001	6	2	5	0	0	1	2	17
730002	0	2	13	0	0	1	2	18
741100	20	3	18	1	1	2	2	46
741200	63	10	29	1	1	8	5	116
742009	91	14	64	1	9	11	12	201
744000	49	5	40	0	1	4	3	102
747000	36	1	15	1	0	1	5	60
748009	179	18	45	11	8	14	13	289
751100	0	4	89	0	0	3	9	106
751209	0	4	77	0	0	3	4	88
751300	0	0	38	0	0	0	2	40
752000	0	0	113	0	7	0	8	129
752001								
801000	0	1	142	0	0	1	7	151
802000	0	2	58	1	0	2	3	66
803000	0	1	39	0	0	0	2	42
804001	1	0	2	0	0	0	0	3
804002	0	1	20	0	0	1	1	25
851100	0	1	151	0	1	0	3	156
851209	36	4	56	1	0	3	1	101
853109	0	1	108	0	0	0	0	109
853209	1	2	180	3	0	1	1	189
900010	1	0	15	0	0	0	1	17
900020	3	1	13	0	0	0	2	19
900030	2	0	3	0	0	0	1	7
910000	24	18	58	5	1	14	3	123
920001	30	5	37	4	2	4	4	86
920002	0	2	20	1	0	2	2	27
930009	14	1	14	1	0	1	2	32
950000	0	0	0	0	0	0	0	0
Total	3.793	466	4.245	155	180	359	447	9.645

7.0.5 Work in the “black” economy, underreporting and the associated VAT fraud

In the Danish national accounts, there are two types of allowance for the black economy. First of all, there are estimates for the *work that is hidden* to the public authorities in order to avoid taxes. In these cases, both the seller and the buyer of a product will typically know that the production is not reported to the tax authorities, and the price will be below market price. Secondly, there are allowances for the *under-reporting and the associated VAT fraud* that companies take advantage of. In these cases, buyers do not necessarily know that the production is not declared. In any industry, there is only one type of allowance in order to avoid the risk of double counting. This would probably be the case if both types of allowance were introduced in a given industry since a significant part of the extra profits made by taking advantage of under-reporting will be spent on hiring black labour. The allowances for the black economy are additions to output and value added. There are no corrections to intermediate consumption.

The values for the black economy in 2003 are based on a benchmark study in 2004, which was partly financed by the EU²⁷. The results from this benchmark study and the benchmark study before that from 1992 are then interpolated using various methods. In some cases results from the Rockwool Foundation²⁸ are used for the interpolation. The results from the Rockwool Foundation can not be used for the levels, mainly because the valuation is at “white” prices. For the national accounts the actual transaction prices must be used, that is “black” prices. In other cases the development in the previous values at product level are used. In the remaining cases the two benchmarks are interpolated under the assumption that growth is evenly distributed over the period.

For the benchmark study, the value of the *hidden work* is estimated using telephone interviews while the estimates for the value of *under-reporting and associated VAT fraud* are found using the discrepancy method and other indicators. Table 7.5 shows which method is used in industries with “black” economy.

²⁷ The study is described in detail in the report “Underground production in Denmark” by Statistics Denmark from 2004.

²⁸ The Rockwool Foundation is a Danish Research institution that among other things undertakes research in tax evasion and the black economy.

**Table 7.5: Allowance for black economy.
Method used for benchmark estimates 2004 by industry**

Industry	Method
050000 Fishing	Telephone interviews
18xxxx-36xxxx Manufacturing	Telephone interviews
450002 Repair and maintenance of buildings	Telephone interviews
502000 Repair and maintenance of motor vehicles	Telephone interviews
521090 Retail trade of food etc.	Indicator method
524490 Other retail sale, repair work	Telephone interviews
553009 Restaurants etc.	Indicator method
602223 Taxi operation and coach services	Telephone interviews
602409 Freight transport by road and via pipelines	Telephone interviews
722000 Software consultancy and supply	Telephone interviews
741200 Accounting, book-keeping, auditing etc.	Telephone interviews
747000 Industrial cleaning	Telephone interviews
804001 Adult and other education (market)	Telephone interviews
851209 Medical, dental, veterinary activities etc.	Telephone interviews
920001 Recreational, cultural, sporting activities (market)	Telephone interviews
930009 Other service activities	Discrepancy method
950000 Private households with employed persons	Telephone interviews/ discrepancy method

The following describes the three different methods used for the benchmark year 2004.

Telephone surveys

The main source behind the estimates of the *hidden work* is more than 10,000 telephone interviews, which have been carried out in connection with the Danish Labour Force Survey (LFS) in the first two quarters of 2004. As mentioned, the estimates stemming from the telephone interviews are primarily used in industries, where *hidden work* is believed to be the dominant underground activity.

The information from the telephone interviews is valued at “black” prices, which are the actual transaction prices and therefore the market values. The respondents were asked about the value of the black work. In cases when they did not give this information, the value has been imputed.

Telephone interviews have been used as the basis in the following industries:

050000	Fishing
158120	Bakers' shops
180000	Manufacture of wearing apparel etc.
200000	Manufacture of wood and wood products
222009	Manufacturing, Printing activities
361000	Manufacture of furniture
362060	Manufacture of toys, gold and silver articles, etc.
450002	Repair and maintenance of buildings
502000	Repair and maintenance of motor vehicles
524490	Other retail sale, repair work
602223	Taxi operation and coach services
602409	Freight transport by road and via pipelines
741200	Accounting, bookkeeping, auditing, etc.
747000	Industrial cleaning

804001	Adult and other education (market)
851209	Medical, dental and veterinary activities
920001	Recreational, cultural, sporting activities (market)
930009	Other service activities
950000	Private household with employed persons (part of).

Discrepancy method

The idea behind the discrepancy methods is to confront an economic quantity from the supply side with a ditto from the demand side. It is assumed that income/production is not always registered whereas expenditure would usually be registered. When the figures on the demand side are higher than on the supply side, the discrepancy must be the production that is not registered on the supply side.

A well-known discrepancy method used for national accounts purposes is to confront registered production in a given industry with the expenditure estimates from the consumer surveys. Since the Danish consumer survey is very detailed, information on the expenditure on specific products is available. This makes a direct comparison between supply and demand of a given product possible. The method has been used to estimate the allowance for under-reporting and the associated VAT fraud in *hairdressing salons and beauty parlours* and part of the *hidden production of cleaning services for private households*.

Indicator method

The basic idea behind the method is that information collected in the economy can be used directly to estimate the value of under-reporting. Naturally, the tax authorities get valuable pieces of information when carrying out their unannounced raids. In addition to this, personal interviews carried out by Rezaei (2003, 2004)²⁹ is used to identify in which industries the under-reporting takes place, and what the value of the under-reporting is. Rezaei's study focuses solely on immigrants who own a firm or who are employed. His sample is not representative for the whole population and must be used with caution. Based on these sources of information, a set of indicators that reveal the hidden share of turnover in different industries can be constructed.

The indicator method is used to estimate the value of under-reporting in the national accounts industries *retail trade of food* and *restaurants* because under-reporting is thought to be the dominant black activity in these industries. In addition, an allowance is made for *tips in restaurants* that are not declared to the tax authorities.

Table 7.6 shows all allowances for the black economy, i.e. underreporting and associated VAT-fraud and hidden economy divided by industry and product. The basic price equals the purchasing price and the allowances for production equals the allowances for value added because it is assumed that intermediate consumption is already accounted for.

²⁹ Rezaei, Shahamak (2003). Det dual arbejdsmarked i et velfærdsstatsligt perspektiv – et studie af dilemmaet mellem uformel økonomisk praksis og indvandreres socio-økonomiske integration. Delrapport 1. RUC, Roskilde.

Rezaei, Shahamak (2004). Det duale arbejdsmarked i et velfærdsstatsligt perspektiv – et studie af dilemmaet mellem uformel økonomisk praksis og indvandreres socioøkonomiske integration. Delrapport 2. RUC, Roskilde.

Table 7.6 Explicit allowances for underreporting and work in the black economy

Industry	Text	Product No	Text	Value, DKK mill.
050000	Fishing	H050000	Black-economy, fishing	14
158120	Bakers' shops	H158120	Black-economy, manufacturing, bakeries	34
180000	Manuf., wearing apparel	H180000	Black-economy, manufacturing, wearing apparel	13
200000	Manuf. wood and -prod.	H200000	Black-economy, manuf., wood and wood products	54
222009	Manuf., printing active.	H222009	Black-economy, manufacturing, printing activities	13
361000	Manuf. of furniture	H361000	Black-economy, manufacturing of furniture	13
362060	Manuf. toys, gold articl.	H362060	Black-economy, manuf., toys, gold and silver articles	7
454002	Rep. and maint. of build.	H454001	Black-economy; repair and maintenance, buildings	2 842
		H454010	Black-economy; repair and maintenance, dwellings	671
502000	Repair and maintenance of motorvehicles	H502000	Black-economy; repair and maintenance, motor vehicles	384
521090	Retail trade of food	H521090	Underreporting, retail trade with food products	855
		H521091	VAT fraud connect. with underrep., retail trade with food prod.	214
524490	Other retail sale, repair work	H527210	Black-economy, Repair and maintenance, household machines	1 108
553009	Restaurants	H553000	Underreporting in restaurants	950
		H553001	VAT fraud connected with underreporting in restaurants	237
		H553002	Underreporting, tips and gratuities	207
		H553003	VAT fraud connected with underreporting, tips and gratuities	52
602223	Taxi operation and coach services	H602223	Black economy; taxi and coach services	18
602409	Freight transport by road and via pipelines	H602409	Black economy; freight transport	181
722000	Software consultants	H722000	Black economy, software services	335
741200	Accounting, bookkeeping etc.	H741200	Black economy, accounting, bookkeeping etc.	35
747000	Industrial cleaning	H747010	Black economy, industrial cleaning	21
804001	Adult and other education (market)	H804001	Black economy, teaching	51
851209	Medical, dental and vet. activities	H851400	Black economy, health care	64
920001	Recreational, cultural, sporting activities (market)	H923110	Black economy, theatres and concerts etc.	398
930009	Other service activities	H930210	Underreporting, hairdressing salons	555
		H930211	VAT fraud connected with underreporting, hairdressing salons	139
950000	Private households with employed persons	H950000	Black economy, private households with employed persons	1 187
			Total	10 650

7.0.6 Illegal activity

Statistics Denmark includes illegal activity in GDP and GNI for own resource purposes only. It is not included in our national publications. An inclusion in the national publication will be considered in connection with the next major revision.

According to ESA95, illegal activity is included in the production boundary. Illegal activity differs from the black economy in that the activity is illegal in itself. The black economy is illegal in the sense that the evasion of taxes etc. makes it illegal, but the activity is not illegal as such.

For practical purposes, illegal activity includes smuggling, prostitution and drugs. Table 7.7 shows total value added related to illegal activity.

Table 7.7: Illegal activity, value added. Mill DKK.

		2002	2003	2004	2005
Value added:					
	Smuggling	335	281	241	255
+	Prostitution	1.169	1.161	1.155	1.224
+	narcotics	1.477	1.228	900	953
=	Illegal aktivitet, total	2.981	2.670	2.296	2.432

No corrections have been made for *double counting*. First of all only trade margins are included. This means, that there is no risk that values already included in imports are included again. Secondly, there is not sufficient information for corrections due to for example money laundering. It is not unlikely, that part of the income generated by illegal activities is laundered in other industries by routing the income to these industries and hereby increasing turnover. Thirdly, it is not unlikely that some expenses on prostitution are already included as expenses in bars and clubs. No corrections have been made for that, however the estimates for prostitution are expected to be on the lower side.

The three types of illegal activity will be described below.

Smuggling is defined as: *Imports of goods for reselling not subject to payment of Danish taxes and duties. The goods may have been imported subject to or not subject to duties paid abroad.* Smuggling includes smuggling of alcohol, tobacco, soft drinks and sweets, and the estimates are made as quantities times prices. A benchmark estimate is made for 2001 based on estimates of quantities from the Ministry of Taxation. In a report from 2006, the Ministry of taxation prints similar information for 2006³⁰. It is assumed that any intermediate consumption or gross fixed capital formation related to the smuggling activity is already accounted for. Therefore, the trade margins, as described below, account for total value added related to smuggling.

Smuggling of alcohol includes beer and wine. The smuggled beer and wine is mainly sold at small groceries because it is difficult for them to obtain favourable prices at the whole-saler because they only purchase small amounts.

For *beer* it is assumed that the smuggled quantity in 2006 makes up 2-3% of the quantities subject to duties. This is based on estimates from the Ministry of Taxation. For the national accounts estimates 2,5 % is used. A benchmark price for a bargain box of beer south of the Danish border (Germany) in 2001 is used. This price is used for the import value. For the illegal sales price in Denmark, the price of a bargain box of beer in Denmark is used. The difference between the two is

³⁰ Status over grænsehandel 2006. Can be downloaded from www.skm.dk.

the trade margin. Both prices are extrapolated using the German and Danish consumer price index, respectively, for beer.

For *wine* it is assumed that the smuggled quantity in 2001 makes up 1 % of the quantities subject to duties. This is based on estimates from the Ministry of Taxation. For the national accounts estimates 1 % is used. A benchmark price for a bargain box of 6 bottles of wine of standard quality south of the Danish border (Germany) in 2001 is used for the import value. For the illegal sales price in Denmark, the price of a bargain box of 6 bottles of wine in Denmark is used. The difference between the two is the trade margin. Both prices are extrapolated using the German and Danish consumer price index, respectively, for wine.

For *tobacco* only very limited information is available. The Danish Ministry of Taxation estimated that in 2001 about 300 mill. cigarettes are sold illegally every year in Denmark. The majority of smuggled cigarettes come from Eastern Europe and are mainly sold at pubs and large workplaces. The import price is based on prices in Poland and the illegal sales price in Denmark is assumed to be well below the Danish legal price. It must be underlined that for tobacco the market is declining, as the Danish duty rates are declining.

In Denmark there is an illegal market for *soft drinks*, as soft drinks are subject to duties and prices therefore a higher than in fx. Poland. Smuggled soft drinks are sold in small kiosks in particular in Copenhagen. The quantities are based on information from the Danish Brewers association. This information is also used by the Ministry of Taxation. In 2003 illegal sales were estimated to have reached at least 25 mill. litres (for comparison, 427,4 mill. litres were sold legally). As it is assumed that the major part of smuggled soft drinks come from Poland, the Polish retail price is used for the import price. For the illegal sales price in Denmark, observed prices in small “kiosks” in Copenhagen are used.

Sweets and chocolates are also subject to duty in Denmark. It is estimated by the Danish Ministry of taxation that the smuggled amounts in 2001 are a little less than 2 percent of total consumption. Smuggled sweets and chocolates are mainly from Germany. Therefore, import prices are based on prices in Germany and the illegal sales prices are based on bargain prices in Danish Supermarkets. Smuggled sweets and chocolates are sold in small kiosks or groceries.

Table 7.8 shows value added by type of smuggled goods. The values shown for the different products are at retail prices and the value shown for tourist expenditure (part of private consumption expenditure) is the total value at import prices. As the foreign trade in services for the period in question is based on the settlement statistics, the import values will be captured by this item.

Table 7.8 Value added by type of smuggled good. Mill. DKK

		2002	2003	2004
	Total Value added:	335	281	241
+	Sweets and chocolate	165	202	250
+	Soft drinks	288	231	220
+	Wine	71	71	70
+	Beer	132	123	111
+	Tobacco	309	252	231
-	Tourist expenditures	629	598	640

Prostitution has been compiled from both the supply and the demand side. The supply side estimate is based on number of prostitutes, divided into 5 types of prostitution and multiplied by prices. The number of prostitutes is based on a report from the Danish Centre for research on social vulnerability. The number of prostitutes are divided between resident prostitutes (prostitutes that stay in the country for one year or more), who produce services as domestic production and prostitutes that stay less than one year on tourist visas, who produce imported services. Prices are based on adds from newspapers and the internet. The demand side estimate is based on a study also from the Danish Centre for Research on Social Vulnerability, which has asked a number of men on the number of visits to prostitutes. The number of visits is then multiplied by an average price per visit estimated on the basis of adds. Comparing the supply and the demand side estimates reveals that the demand side estimates are about 500 mill. DKK higher than the supply side estimate. However, all sources indicate, that the supply side information is more reliable than the demand side information. But we also know, that it is most likely that the supply side is underestimated. As a sort of balancing, we therefore add 10 % to the supply side estimate. It I assumed that expenses on intermediate consumption are already accounted for. Partly as intermediate consumption but also partly as private consumption expenditure. It is, however, not possible on a reasonable basis to move expenses from private consumption to intermediate consumption.

Table 7.9 shows value added by the 5 types of prostitution. The difference between total value added and total private consumption is import of prostitution services. Contrary to smuggling and trade in drugs, it is not likely that the import of prostitution services is captured by tourist expenditures.

Table 7.9: Value added by type of prostitution. Mill. DKK

		2002	2003	2004
Total value added:		1.169	1.161	1.155
+	Street prostitution	70	66	62
+	Clininc prostitution	838	849	861
+	Individuals working from home	20	25	30
+	Escort service	183	162	141
+	Club prostitution	58	59	59
Total private consumption		1.469	1.459	1.452
+	Street prostitution	88	83	78
+	Clininc prostitution	1.054	1.067	1.083
+	Individuals working from home	25	32	38
+	Escort service	230	204	178
+	Club prostitution	73	74	75

It is assumed that there is no production of *drugs* in Denmark, only trade in drugs. Value added from the sale of drugs is estimated from the demand side. Estimates from the supply side based on seized amounts have also been made but are not used because they are too fluctuating. The demand side is estimated as the average quantities consumed per drug user multiplied by the number of drug users and again multiplied by import- and retail prices respectively. The difference

between consumption valued by import and retail prices then makes the trade margin which is equal to value added. The total number of drug users are made up by the number of “hard” users and the number of recreational users. Information on the number of hard users is taken from a report from the National Board of Health and information on the number of recreational users is based on assumptions on seizures from a report by the police on organised crime in Denmark and assumptions on average consumption by recreational users. Prices are based on information from the above mentioned report from the police on organised crime in Denmark. For import prices (=basic prices), so called” whole-sale prices” are used and for retail-prices, so-called “street prices” are used. It is assumed that any intermediate consumption and gross fixed capital formation related to the trade of drugs is already accounted for elsewhere in the national accounts.

Table 7.10 shows value added by type of drug. The values shown for the different drugs are at retail prices and the value shown for tourist expenditure (part of private consumption expenditure) is the total value at import prices. As the foreign trade in services for the period in question is based on the settlement statistics, the import values will be captured by this item.

Table 7.10 Value added by type of drug, Mill. DKK

		2002	2003	2004
Total Value added:		1.477	1.228	900
+	White heroin	1.046	872	612
+	Brown heroin	483	402	340
+	Cocaine	533	481	516
+	Amphetamine	152	183	163
+	Ecstasy	28	23	20
+	Cannabis	159	162	146
-	Tourist expenditures	923	896	898

7.1 Implicit allowances

No explicit allowances for underreporting are made in agriculture etc, mining and quarrying, dwellings, letting of non-residential premises, industries where public corporations predominate or general government. In mining and quarrying, financial activity and general government, the black economy is assumed not to exist, since these activities are carried out either by public authorities or by very large entities which are closely monitored by public authorities.

For agriculture etc. and dwellings, output is estimated, as described in Chapter 3, using a price times quantity calculation. This captures the value of underreporting and work in the black economy implicitly, since the method ensures that all output in these areas is covered. But it is not possible to estimate concealed activity explicitly. The same goes for letting of non-residential premises, where the output value is estimated from the expenditure side.

7.2 Validation: comparisons with employment data from demographic sources

The latest comparison between employment data and national accounts data was undertaken in 1994 with 1991 as reference year. The comparison was made in relation to the implementation of the Commission Decision (94/168/EC, Euratom) of 22 February 1994 on measures to be taken for the implementation of Council Directive 89/130/EEC, Euratom on the harmonization of the compilation of gross national product at market prices ("exhaustiveness decision").

Demand-side employment (point of view of the enterprises) is the employment underlying the estimate of GDP using the output approach, i.e. employment in those producer units which are covered by the estimate of the industries' gross value added. For 1991 the employment underlying the estimate of the industries' value added before the allowances for activity in the black economy was employment according to the ERE [establishment-related employment] statistics.

Supply-side employment is demographic employment figures reported by households in the form of population censuses and labour force surveys. Since Denmark has not carried out traditional population censuses since 1970 but has switched to register-based estimates, only one demographic source was available, namely the EU-harmonised Labour Force Survey (LFS).

Denmark validated the GNI estimate with the help of employment data by comparing the ERE and the LFS statistics. The report entitled "*Validering af den beskæftigelse, som ligger til grund for nuværende BNI-beregninger*", ["Validation of employment underlying the current GNP calculations"], which Denmark sent to the Commission in 1994 as required by the exhaustiveness decision, discusses the methods used, including conceptual corrections, for the comparison of the statistical sources in question.

Table 7.11 gives the main results of this comparison.

Table 7.11 Comparison of employment data from the demand side and from the supply side

	Self-employed etc.	Employees	Total
<u>ERE</u>			
Calculated man-years (annual FTEs)	239 000	1 946 000	2 185 000
+ employment < 10 hours	0	25 000	25 000
+ certain primary self-employment	30 000	0	30 000
+ secondary VAT payers	30 000	0	30 000
Corrected FTEs	299 000	1 971 000	2 270 000
<u>LFS</u>			
Calculated FTEs	288 000	2 038 000	2 326 000
<u>LFS – ERE</u>			
% of LFS	-3.8	3.3	2.4

The conceptually-corrected ERE statistics show that the volume of labour in Denmark in 1991 can be put at 2 270 000 FTEs, 299 000 of which were self-employed etc. and 1 971 000 of which were employees. The LFS-based estimate, however, gives 2 326 000 FTEs divided into 288 000 self-employed and 2 038 000 employees. There is thus a difference of 56 000 FTEs in the two estimates, or 2.4%. For the self-employed, the ERE figures are higher than the LFS, probably due to uncertainty in the ERE statistics corrections and the LFS sampling uncertainty. There remains a difference for employees, only some 20 000 of which can be explained by the statistical uncertainty in the LFS.

If we first look at the whole economy apart from general government, we see that the LFS has recorded 14 000 more FTEs than the register estimate. Almost the whole of this difference, 11 000, can be explained by the industry "Private households with employed persons". Employment connected with private help in the home is in the vast majority of cases work in the black economy, and this would therefore be a reasonable explanation of the difference. The national accounts employment estimate for the industry is close to the LFS estimate. In general, hidden activity is unlikely to be captured by the LFS (without specific extra questions), since in many cases it is equivalent to a second job for employees who are otherwise legally employed. The remaining difference of 3 000 excluding general government is considered to be due to the fact that the LFS captures a certain amount of work in the black economy by students, pensioners, etc.

There remains sector S.13, general government, where the difference is 53 000 FTEs. Since 10 000 at the most can be explained by sampling uncertainty in the LFS estimate, it would seem that the LFS indicates slightly higher employment than the register estimate.

A substantial share of this difference may be attributed to the calculation of FTEs based on the contribution to the *Arbejdsmarkedets Tillægspension* (ATP) social insurance scheme, which is used in the ERE statistics. Since the general government sector has a relatively large share of part-time employees, the ATP-calculated FTEs are more uncertain in this sector, in particular. In addition, there is the widespread uncertainty about the allocation to industries. The calculated difference in the two estimates of employment in general government cannot therefore be taken as evidence of the fact that there are some units missing from the register-based statistics. All producer units belonging to institutional units in S.13 are included in the business register. The possibility that there is work in the black economy in producer units owned and controlled by general government must, of course, also be ruled out.

Finally, in the individual industries there are relatively large differences in the two FTE calculations. These virtually cancel out, however, and must be ascribed to different industry allocations in the two estimates.

8. The transition from GDP to GNI - GNI published nationally and GNI for own resource purpose

8.0 Introduction and reference framework

Table 8.1 shows the transition from GDP to GNI published nationally and GNI for own resource purposes.

Table 8.1 Transition from GDP to GNI, 2003

	DKK mill.
GDP	1 400 690
+ Compensation of employees from the ROW	6 158
- Compensation of employees to the ROW	6 772
+ Property income from the ROW	65 576
- Property income to the ROW	80 198
- Taxes on production and imports to the ROW	2 341
+ Subsidies from the ROW	9 007
= Nationally published GNI (ESA 95)	1 392 120
+ Illegal activity	2 670
- EU's third own resource (definitional difference)	2 828
- FISIM	14 274
= GNI for fourth own resource purposes	1 377 688

It is important to note that for Denmark, GNI published nationally is different from GNI used for own resource purposes. The differences are well defined and shown in table 8.1

The adjustment for illegal activity has not yet been introduced in our national publications as it is only possible in connection with a major revision. Because illegal activity is part of the production boundary in ESA95, Statistics Denmark considers the explicit adjustment to GNI for own resource purposes as a satisfactory solution in the short run. The estimates of illegal activity are described further in chapter 7.

The adjustment made for EU's third own resource is due to the fact that this contribution to the EU is recorded as a transfer to the rest of the world in our national publication. For GNI own resource purposes, this contribution is recorded as taxes on products paid directly to the EU because it is based on VAT.

The adjustment for FISIM follows directly from the Council decision on EU own resources (2000/597), according to which the allocation of FISIM to user sectors should not have an impact on GNI for own resource purposes until the Council so decides. The calculation of FISIM allocated to user sector is described in chapter 9.

8.1 Compensation of employees

The main source for compensation of employees is *Danmarks Nationalbank's* settlements statistics - cf. Section 5.16. It should be noted, though, that a large part of the item concerned is due to below threshold estimates. These figures are corrected for wages paid to Danish building workers employed on Danish building sites in the ROW. Since these sites are considered to be producer units in the ROW, the wages, which go to Danish workers, are considered as coming from the ROW even though they are paid by the Danish construction firm. The source for this correction is VAT statistics information on tax-free export sales by Danish construction firms. A share of these "export sales" is considered to be wages from the rest of the world.

Another statistical problem is that ESA 95 requires the compensation of employees to and from the ROW to be recorded gross, i.e. before deductions for income tax and social security contributions, which are deducted at source, whereas the settlements statistics record actual payments, i.e. the wages paid out after tax etc. has been withheld in the ROW and in Denmark respectively. The settlements statistics figures for the compensation of employees to and from the ROW are therefore corrected for income taxes and social security contributions paid. The correction is based on aggregate shares of the total compensation accounted for by income tax and social security contributions in Denmark, Sweden and Germany.

8.2 Taxes on production and imports

Taxes on production and imports to the EU Institutions are recorded directly in central government accounts, in gross terms, before the payment of 25% of customs revenues which the Member States receive as payment for administrative services. These services are counted as exports of services.

As described in section 8.0, contributions to the EU's third own resource, which is based on VAT, is not recorded as taxes on products paid directly to the EU in our national publication. Therefore an explicit adjustment is made to GNI for the purpose of the fourth own resource, in which the contribution to the third own resource is treated as a tax on products paid directly to the EU.

8.3 Subsidies

Subsidies from the EU Institutions are recorded in central government accounts. The subsidies are related to agricultural schemes.

8.4 Interest

The main source for the interest item is *Danmarks Nationalbank's* settlements statistics – cf. Section 5.16. Under interest payable to the ROW, a correction is made for losses on the issue price of discounted bonds and the index-linked premiums on index-linked bonds. The ROW has large holdings of these types of bonds issued by Danish residents. In line with the ESA 95, the method used to break down losses on discounted bonds over their lifetime is the mathematical method based on the debtor's point of view. Conversely, there is no correction on the income side. Since these types of bonds are much less common in the ROW than in Denmark, and there is no information available on Danish residents' holdings of foreign bonds divided by fund code, it was

decided not to make any correction on the income side for the time being. As far as is known, Danish financial institutions' holdings of foreign bonds issued at prices very different from par and of foreign index-linked bonds are insignificant.

There is no correction for tax withheld at source on interest income received from and paid to the ROW. There is no such tax in Denmark and (for reasons of competition) it is not common in other countries either.

Corrections for FISIM on interest flows to and from abroad as a result of the allocation of FISIM to user sectors have been undertaken. However, as described in chapter 9, FISIM should not be allocated for own resource purposes. Therefore, an overall adjustment for the allocation of FISIM on GNI is made, cf. section 8.0 and chapter 9.

8.5 Distributed income of corporations

The source for the distributed income item is *Danmarks Nationalbank's* settlements statistics – cf. Section 5.16. No correction is made for withholding tax on income distributed to or from the ROW. It is therefore implicitly assumed that tax is always refunded to ROW dividend recipients if there is a withholding tax on those dividends. Since settlements statistics record dividends as at the date of payment, payments are periodised in line with paragraph 4.55 of the ESA 95.

No correction is made for reinvested interest and dividend income in mutual funds which issue accumulation units. Under Commission Decision 97/157/EC, Euratom, reinvested earnings in such funds are considered to be property income for the owners of the investment certificates.

In Denmark, as in most other countries, there is a range of resident mutual funds which enable investors to invest in virtually all types of domestic and foreign securities, and there is therefore no obvious incentive for residents to invest in foreign rather than domestic funds unless the motive is tax evasion. It must be considered likely that those Danes who may have such investment certificates in the ROW have chosen countries with rules on banking secrecy such as Switzerland or Luxembourg. It goes without saying that the banking authorities in those countries do not readily disclose information which can shed light on the extent of possible tax evasion.

It is well known that some Danish citizens have large financial assets in the ROW, but the known cases are Danish nationals resident in another country, and their property income from the ROW should not be included in the Danish national accounts. For wealthy Danes who wish to avoid being taxed on their property income, emigration is an entirely legal way of avoiding the high Danish tax rates on positive property income.

8.6 Reinvested earnings on foreign direct investments

For the balance of payments statistics, *Danmarks Nationalbank* estimates reinvested earnings on the basis of questionnaire surveys, which in principle cover all inward and outward foreign direct investment enterprises. The population for the questionnaire surveys is a register of all firms/enterprises in Denmark which represent foreign direct investments, along with Danish firms' direct investments in the ROW. The source for register updating is the settlements statistics, the

basic figures of which include information on payments to and from Denmark in connection with direct investments at individual unit level.

The recording of financial transactions (direct investments) includes the following information:

CVR (business register) number

Branch code

Sector code

Type (inward or outward)

Amount

Currency involved

Partner country

Date entered in the books

Indication of purpose.

It is thus possible to obtain information on the Danish corporation to which the direct investments relate. It will not be possible, however, to see who has sold the equity. To decide who the sellers are, we therefore have to use accounting information on the ownership structure of the corporation sold.

It will not be apparent, either, whether and to what extent part-payments are involved (for example, in connection with an agreement that an investment will take place over several periods) or whether the transaction is one-off.

The indications of purpose show whether the equity is being set up/extended or liquidated. Extending equity from under 10% to over 10% also constitutes direct investment, even if the extension is under 10% - and the same applies to liquidation.

The estimates of direct investments stocks are based on the *Nationalbank's* annual questionnaire survey (which is also used for the estimate of Denmark's foreign debt).

The questionnaire surveys include the following information:

- 0 CVR number (as from the census year 2000 – previously, recording by log entry number)
- 1 Partner country
- 2 Percentage share of capital
- 3 Amount
- 4 Result before tax/dividend retained/dividend paid out/operating surplus.

"Capital" means share capital plus reserves, including the undistributed share of previous years' results. For corporations quoted on the stock exchange, the quoted value is also reported. Investments in unlisted corporations are included in terms of the corporation's book value.

The reinvested earnings on foreign direct investments in the balance of payments and in the national accounts are calculated as the difference between the surplus (profits) for the year and the dividends paid out during that same year according to the settlements statistics. This implies that Method II according to document GNIC/052 is applied. It should be noted that as the settlements statistics have been discontinued by the end of 2004 a new data collection system has been taken into use by *Danmarks Nationalbank* implying the application of Method I as from 2005.

8.7 Property income attributed to insurance policy holders

In addition to actual interest, property income allocated to insurance policyholders to and from the ROW is calculated. For sources and methods of insurance calculations, reference should be made to Section 3.16. All property income allocated to policyholders who are non-resident is assumed to come from non-life insurance. The values for 2003 are as follows:

Property income allocated to policyholders from the ROW:

DKK 293 mill.

Property income allocated to policyholders to the ROW:

DKK 677 mill.

8.8 Rents on land and sub-soil assets

As land in the present context can be owned by resident units only, cf. BPM 5, 316, rents on land and sub-soil assets to and from the ROW are considered to be nonexistent by definition.

9. FISIM: Calculation, allocation and impact on GNI

Introduction

The FISIM calculation is defined in Council Regulation (EEC) no. 448/98 of 16 February 1998 and implemented by Council Regulation (EC) No 1889/2002 of 23 October 2002. The regulation of 16 February 1998 aims at allocating FISIM to consumers, so that it is possible to distinguish between final use of FISIM and FISIM as intermediate consumption. All EU member states are obliged to implement an allocation of FISIM in the National Accounts. However, this allocation should not have an impact on GNI own resources until the Council so decides.

Statistical sources

The following sources are used for the FISIM calculations:

Money and banking statistics:

- accrued interest flows of the balance-sheet statistics
- average balances as of the end-of-quarter of the balance-sheet statistics
- zero-interest loans, compiled on a quarterly basis.

Money and capital market statistics: Stocks of loans and deposits with a breakdown by resident branch.

Financial accounts of the Rest of the World, which cover resident sectors loans and deposits from/to RoW.

Total modules are used when allocating FISIM to industries. Total modules show final balanced national accounts values by sector and industry for transactions in products and distributive transactions etc.

A distribution key for wages and intermediate consumption is used for allocation of FISIM at the most detailed level (843 industries) for general government sectors: S.1311 (general government), S.1313 (local government), and S. 1314 (social security). The distribution key is produced as part of the compilation of general government.

The FISIM calculation

FISIM is exclusively produced by financial corporations, which engage in financial intermediation of loans and deposits for which the rate of interest is controlled by the financial corporations (and thus the interest margin and the earnings that they want to achieve in this way). A majority of the FISIM production takes place in banks, which continuously account for a dominant share of Danish loans and deposits. In addition to the more conventional dissemination of loans and deposits by banks and saving banks, FISIM is produced by financial corporations intermediating consumer credit and financial leasing.

In accordance with the Council Regulation, the FISIM calculations are based on the reference rate method. I.e. the consumption of FISIM by each individual unit (sector or industry) is estimated as the difference between interest receivable on deposits/paid interest on loans and interest compiled

using an interest reference rate. The reference rate is regarded as a 'pure' economic rate of interest i.e. exclusive any kind of risk premium or direct payment for the financial service delivered. The consumption of FISIM is estimated as the sum of FISIM on deposits and FISIM on loans:

$$\text{FISIM} = \text{FISIM on deposits: (deposits*interest reference rate) - paid interest on deposits} \\ + \text{FISIM on loans: (interest receivable on loans) - (loans*interest reference rate)}$$

Only the major financial institutions (the largest 95 pct. of all financial institutions) fully report to the Money and banking statistics. In order to calculate FISIM production for all financial institutions a grossing procedure is carried out. Money and banking statistics already include a breakdown of interest flows and balances into sectors.

Import of FISIM is based on resident FISIM producers' outstanding amounts with residents. Financial accounts for the Rest of the World are used as the basis for calculations of FISIM import. They cover resident sectors deposits and loans abroad. There is some uncertainty whether financial institutions abroad are solely FISIM producers, but it is assumed to be the case (a majority of outstanding amounts will probably relate to larger financial institutions).

The Rest of the World's outstanding amounts with resident S.14 are assumed to solely take place in households in their capacity of consumers and unincorporated enterprises and not as dwelling loans. An allocation is calculated using the shares calculated for resident financial institutions' outstanding amount with resident households in foreign currency.

Information about stocks of loans and deposit for non residents (*FISIM export*) is included in the Money and banking statistics, which is the reason, why any further delimitation is not necessary.

Reference rate calculation

The interest reference rate is calculated in accordance with Council Regulation (EC) No 448/98. The interest reference rate is based on inter bank rates, which are estimated as the ratio between interest receivable on loans and stocks of loans between the financial corporations producing FISIM. The external reference rate is estimated in a similar way on the basis of inter bank outstanding amounts between resident and non-resident financial intermediaries. The following specifications are made:

Internal interest reference rate: A pure delimitation of inter bank outstanding amounts is complicated, since it is difficult to separate FISIM producers from non-FISIM producers. The internal interest reference rate is therefore calculated on the basis of financial institutions' outstanding amounts with other financial institutions and outstanding amounts with 65.21.00 (financial leasing) and 65.22.60 (financing companies). Financial institutions' outstanding amounts with possible FISIM producers in 65.22.40 (other credit institutes) and 65.22.95 (other lending activities) are not included in the calculations, since it is assumed that units in 65.22.40 (other credit institutes) and 65.22.95 (other lending activities) are primarily not FISIM producers. Financial institutions are clearly the most important FISIM producing institutions, which is the reason behind the assumption that inter bank outstanding amounts are satisfactorily covered in the calculation of the internal interest rate.

The *external interest reference rate* is calculated on the basis of resident financial institutions' outstanding amounts (*both loans and deposits*) with non resident financial institutions and with non

resident other credit institutes. This corresponds to a situation, where the external interest reference rate is calculated on the basis of outstanding amounts between resident financial institutions and non resident other monetary financial institutions. As in the case of the calculation of the internal interest rate, financial institutions' outstanding amounts with foreign countries seems satisfactory covered.

In order to further delimit the interest reference rate a split between financial institutions' outstanding amounts with other monetary institutions (S.122) and other financial intermediaries (S.123) is conducted. The split takes place using the industry breakdown of financial institutions' loans and deposits from money and capital market statistics. The industry breakdown covers the major financial institutions' outstanding amounts with residents, both in domestic and foreign currency. Balances can therefore not be directly used. Outstanding amounts are distributed by industry by adjustment of the shares of deposits and loans that industries have in S.122 and S.123.

The results of the calculations of interest reference rates and the inter bank rate are shown in table 9.1.

Table 9.1: Interest reference rate in Denmark

Pct.	1997	1998	1999	2000	2001	2002	2003	2004	2005
Ext. ref. rate	4,31	4,80	3,88	4,99	4,09	2,95	2,06	1,93	2,16
Int.ref. rate	3,99	4,32	3,83	5,07	4,27	3,47	2,84	2,52	2,18
T/N rate (interbank rate)	3,52	4,12	3,10	4,37	4,70	3,48	2,44	2,16	2,15

Breakdown of output by user sectors

The breakdown to user sectors is made directly as part of the calculation of FISIM output. Information from the Money and banking statistics together with information from the financial accounts from the Rest of the World is used. The Money and banking statistics carries information which is used for the breakdown of stocks into user-sectors (S.11 Non-financial corporations, S.12 Financial corporations, S.13 General Government, S.14 Households and S.15 NPISH)

For households and NPISH, a further division into households as final consumers, households as owners of dwellings and households in their function of unincorporated enterprises is made. FISIM allocated to the latter two functions of households are treated as intermediate consumption, whereas FISIM allocated to households as consumers is treated as final consumption expenditure.

Money and banking statistics provide the necessary breakdown of stocks of loans/deposits and interest flows to calculate final and intermediate consumption of households as well as of non-financial corporations, financial corporations and general government.

Breakdown of output by industry

The allocation of FISIM to user industries is calculated by combining two methods which are described in Council Regulation (EC) No 1889/2002. It means that calculations are partly based on the stocks of loans and deposits for each industry and on the output of each industry. The breakdown of FISIM on loans and deposits initially takes place on the basis of the 27 industries, which is the industry split used in the Money and capital market statistics. However, there is no

direct connection between sectors and industries, which is the reason why a cross reference table is used. This is done by creating a cross table between sectors and 27 industries for gross value added.

The table for gross value added is created on the basis of the total modules from the national accounts. The total modules contain a link between sector, 130 industry and ESA95 codes.

- Initially, a cross table (sector/130 industries) for output values (P.11, P.12, and P.13) and intermediate consumption (P.2) is created.
- The cross tables are used for the breakdown of FISIM into 27 industries as far as FISIM consumed by S.11, S.13, S.14, and S.15 is concerned.
- In the breakdown to industries, it is assumed that the proportions in the cross table sector/27 industries for financial institutions' loans and deposits also apply to loans and deposits for other FISIM producers, both resident and non resident.

The breakdown of FISIM into 130 industries is generally carried out on the basis of output values. This means that the breakdown into 27 industries for S.11, S.13, S.14 and S.15 is divided further into 130 industries using the linkage between output values for 27 and 130 industries from the total module.

A different method is used for the financial industries. FISIM calculations already include a breakdown into 65.10.00 (financial institutions), 65.20.00 (mortgage credit institutions) and 67.00.00 (activities auxiliary to finance), as this split is necessary when calculating an accurate interest reference rate.

As regards branches 66.01.02 (life insurance and pension funding) and 66.03.00 (non-life insurance) a split of FISIM allocated to S.125 is made on the basis of a specification of the insurance sector into an industry breakdown as described by loans and deposits of major financial institutions in money and capital market statistics. This breakdown into 66.01.02 (life insurance and pension funding) and 66.03.00 (non-life insurance) is also applied to the import of FISIM consumed by S.125.

It should be added, that the described method used for the allocation by industry is not used for the allocation to industry 70.20.09 (dwellings). The reason is, that the FISIM calculations of loans/deposits to/from households are already made as part of the allocation by sector, and that households' function as owners of dwellings are part of this calculation.

The result of the Danish calculation of FISIM allocated to sectors is shown in table 9.2:

Table 9.2: FISIM-output and allocation by sector, mill. dkr.		2003
FISIM-output	1	33.028
FISIM produced in Denmark allocated to domestic units :	2	30.417
- Non-financial corporations	3	8.962
- Financial corporations excl. insurance and pension	4	2.048
- Insurance corporations and pension funds	5	14
- General government	6	342
- Households		
- as consumers	7	13.891
- as owners of dwellings	8	2.455
- as un-incorporated enterprises and NPISH	9	2706
Export of FISIM	10	2.611
Import of FISIM allocated to domestic units:	11	4.214
- Non-financial corporations	12	3.692
- Financial corporations excl. insurance and pension	13	474
- Insurance corporations and pension funds	14	4
- General government	15	4
- Households		
- as consumers	16	35
- as owners of dwellings	17	0
- as un-incorporated enterprises and NPISH	18	5
Total use of FISIM	19=1+11	37.243
- Non-financial corporations	20=3+12	12.654
- Financial corporations excl. insurance and pension	21=4+13	2.522
- Insurance corporations and pension funds	22=5+14	18
- General government	23=6+15	346
- Households		
- as consumers	24=7+16	13926
- as owners of dwellings	25=8+17	2455
- as un-incorporated enterprises and NPISH	26=9+18	2711
Export of FISIM	27=10	2.611
Total supply of FISIM	28=29+30	37.242
Domestic production	29=1	33.028
Import	30=11	4.214
FISIM effect on GDP	31=23+24+27-30	12.669
FISIM effect on GNI	32=23+24	14.272

Households in their capacity of consumers (7) account for the greatest contribution to the output of FISIM by financial corporations. The reason why households in their capacity of producers of services related to owner occupied dwellings do not consume a larger share of FISIM than those stated here, is primarily due to the circumstance that mortgage banks are not treated as producers of FISIM.

The allocation of FISIM affects GDP by 12,7 bill. DKK and GNI by 14,3 bill. DKK. The two effects are different because the effect of import and export of FISIM are offset by the effect on interest income and interest expenditure to/from the Rest of the World when calculating GNI. Hence, the effect on GNI is only from domestic final uses.

10. Main classifications used

10.0 Classifications used for the production approach

Table 10.1 shows the link between the national accounts' grouping by industry and the NACE Rev. 1.1. There are four levels for publication of the final national accounts, covering 130, 53, 27 and 9 industries respectively.

Table 10.1 includes references to Statistics Denmark's standard grouping at 111-industry level – a level of aggregation not used in the national accounts. The connection between the 111 standard grouping and the most detailed six-digit DK-NACE industries is documented in the publication "*Dansk Branchekode 2003*" published by Statistics Denmark, annexes 1 and 2 of which include the aggregation key.

There are two reasons why the national accounts cannot use the 111 standard grouping as their most detailed level of publication. Firstly, it does not match the functional breakdown of construction in the national accounts, and secondly, within some of the 111 groups, the national accounts need to separate market activity and output for own use from (other) non-market activity.

Table 10.1

Industry groupings

Groupings				Dansk branchekode 2003 (DB03)	
9	27	53	130		
1			Landbrug, fiskeri og råstofudvinding		Agriculture, fishing and quarrying
0109			Landbrug, gartneri og skovbrug		Agriculture, horticulture and forestry
	01109	011009	Landbrug	53-standard	Agriculture
	01129	011209	Gartnerier	53-standard	Marked gardening
	01400	014000	Maskinstationer og anlægsgartnere	53-standard	Machine pools and landscape gardening
	02000	020000	Skovbrug	53-standard	Forestry
0500	05000	050000	Fiskeri	27-standard	Fishing
1009			Råstofudvinding		Mining and quarrying
	11000	110000	Udvinding af olie og naturgas	53-standard	Extr. of oil and natural gas
	14009	140009	Udvinding af grus og ler mv.	53-standard	Extr. of gravel and clay etc.
2			Industri		Manufacturing
1509	15009		Føde-, drikke-, tobaksvarerindustri		Mfr. of food, beverages and tobacco
		151000	Slagterier	111-standard	Production etc. of meat and meat products
		152000	Forarbejdning og konservering af fisk og fiskeprodukter	152010-30	Processing and preserving of fish and fish products
		153000	Forarbejdning og konservering af frugt og grøntsager	153100-153300	Processing and preserving of fruit and vegetables
		154000	Fremstilling af vegetabiliske og animalske olier og fedt	154100-154300	Mfr. of vegetable and animal oils and fats
		155000	Mejerier og isfabrikker	111-standard	Mfr. of dairy products
		156009	Fremstilling af stivelsesprodukter, chokolade- og sukkervarer mv.	156-157,1584-89	Mfr. of starch, chocolate and sugar products
		158109	Fremstilling af brød, kager og kiks	158110, 158200	Mfr. of bread, cakes and biscuits
		158120	Bagerier	111-standard	Baker's shops
		158300	Sukkerfabrikker og -raffinaderier	158300	Manufacture of sugar
		159000	Drikkevarerindustri	111-standard	Manufacture of beverages
		160000	Tobaksindustri	111-standard	Manufacture of tobacco products
1709	17009		Tekstil- og læderindustri		Mfr. of textiles and leather
		170000	Tekstilindustri	111-standard	Mfr. of textiles
		180000	Beklædningsindustri	111-standard	Mfr. of wearing apparel
		190000	Læder- og fodtøjsindustri	111-standard	Mfr. of leather and footwear
2009			Træ-, papir- og grafisk industri		Mfr. of wood products, printing and publ.
	20000	200000	Træindustri	53-standard	Mfr. of wood and wood products
	21009		Papir- og grafisk industri	53-standard	Mfr. of paper prod.; printing and publish.
		210000	Papirindustri	111-standard	Mfr. of pulp, paper and paper products
		221200	Dagbladsvirksomhed	111-standard	Publishing of newspapers
		221309	Forlagsvirksomhed ekskl. dagblade	111-standard	Publishing activities, excluding newspapers
		222009	Trykkerier	111-standard	Printing activities
2309			Kemisk industri og plastindustri		Mfr. of chemicals, plastic products etc.
	23000	230000	Mineralolieindustri	53-standard	Mfr. of refined petroleum products etc.
	24000		Kemisk industri	53-standard	Mfr. of chemicals
		241109	Fremstilling af industrigasser og uorganiske basiskemikalier	241100, 241300	Mfr. of industrial gases and inorganic basic chemicals
		241209	Fremstilling af farvestoffer, pigmenter samt organiske basiskemikalier	241200, 241400	Mfr. of dyes, pigments and organic basic chemicals
		241500	Fremstilling af kunstgødning mv.	241500	Manufacture of fertilizers
		241617	Fremstilling af basisplast og syntetisk gummi	241600-241700	Mfr. of plastics and synthetic rubber
		242000	Fremstilling af pesticider mv.	242000	Manufacture of pesticides and other agro-chemical products
		243000	Fremstilling af maling, lak, trykfarver mv. samt tætningsmaterialer	243000	Mfr. of paints, varnishes and similar coatings, printing ink and mastics
		244000	Medicinalindustri	111-standard	Mfr. of pharmaceuticals etc.
		245070	Fremstilling af rengøringsmidler samt øvrige kemiske produkter	245110-247000	Mfr. of detergents and other chemical products

Table 10.1 (continued)

Industry groupings

Grupperinger				Dansk branchekode 2003 (DB03)	
9	27	53	130		
	25000	Gummi- og plastindustri			Mfr. of rubber and plastic products
	251122	Fremstilling af gummiprodukter samt plastemballage mv.		251100-252200	Mfr. of rubber products and plastic packing goods etc.
	252300	Fremstilling af bygningsartikler af plast		252310-252390	Mfr. of builders' ware of plastic
	252400	Fremstilling af andre plastprodukter		252410-252490	Manufacture of other plastic products n.e.c.
2600	26000	Sten-, ler- og glasindustri			Mfr. of other non-metallic mineral products
	261126	Glas- og keramisk industri		261100-262600	Mfr. of glass and ceramic goods etc.
	263053	Fremstilling af cement, mursten, tagsten, fliser mv.		263000-265300	Mfr. of cement, bricks, tiles, flags etc.
	266080	Fremstilling af produkter af beton, cement, asfalt mv.		266110-268290	Mfr. of concrete, cement, asphalt and rockwool products
2709		Jern- og metalindustri			Mfr. of basic metals and fabr. metal prod.
	27009	Fremstilling og forarbejdning af metal			Mfr. and processing of basic metals
	271000	Fremstilling af råjern og råstål samt jernlegeringer		271000	Mfr. of basic iron and steel and of ferro alloys
	272030	Forarbejdning af jern og stål		272100-273500	First processing of iron and steel
	274000	Fremstilling af ikke-jernholdige metaller		274100-274500	Mfr. of basic non-ferrous metals
	275000	Støbning af metalprodukter		275100-275400	Casting of metal products
	281009	Fremstilling af byggematerialer af metal		111-standard	Mfr. of building materials of metal
	286009	Fremstilling af diverse metal produkter		111-standard	Mfr. of various metal products
	29000	Maskinindustri			Mfr. of machinery and equipment
	291000	Fremstilling af skibsmotorer, pumper		111-standard	Mfr. of marine engines and compressors
	292000	Fremstilling af ovne og køleanlæg		111-standard	Mfr. of ovens and cold-storage plants
	293000	Fremstilling af landbrugsmaskiner		111-standard	Mfr. of agricultural machinery
	294009	Fremstilling af industri maskiner		111-standard	Mfr. of machinery for industries
	297000	Fremstilling af husholdningsapparater		111-standard	Mfr. of domestic appliances
	30009	Elektronikindustri			Mfr. of electrical components
	300000	Fremstilling af kontormaskiner og edb-udstyr		300100-300200	Mfr. of office machinery and computers
	310000	Fremstilling af andre elektriske maskiner og apparater		311010-316290	Mfr. of other electrical machinery and apparatus
	320000	Fremstilling af telemateriel		111-standard	Mfr. of radio and communication equipment
	330000	Fremstilling af medicinsk udstyr og ure		111-standard	Mfr. of medical and optical instruments
	35009	Transportmiddelindustri			Mfr. of transport equipment
	340000	Fremstilling af biler mv.		341000-343000	Manufacture of motor vehicles etc.
	351000	Bygning af skibe og både		111-standard	Building and repairing of ships and boats
	352050	Fremstilling af transportmidler ekskl. skibe og biler mv.		352000-355000	Mfr. of transport equipment excl. ships, motor vehicles etc.
3600	36000	Møbelindustri og anden industri			Mfr. of furniture; manufacturing n.e.c.
	361000	Møbelindustri		111-standard	Mfr. of furniture
	362060	Fremstilling af legetøj, guld- og sølvvarer mv.		362100-366390	Mfr. of toys, gold and silver articles etc.
	370000	Genbrug af affaldsprodukter		371000-372000	Recycling of waste and scrap
3	4009	40009	Energi- og vandforsyning		Electricity, gas and water supply
	401000	Elforsyning		111-standard	Production and distribution of electricity
	402000	Gasforsyning		111-standard	Manufacture and distribution of gas
	403000	Varmeforsyning		111-standard	Steam and hot water supply
	410000	Vandforsyning		111-standard	Collection and distribution of water
4	4500	45000	Bygge og anlæg		Construction
	450001	Nybyggeri		NR-definition	Construction of new buildings
	450002	Reparation og vedligeholdelse af bygninger		NR-definition	Repair and maintenance of buildings
	450003	Anlægsvirksomhed		NR-definition	Civil engineering
	450004	Materialer til bygnings reparation		NR-definition	Construction materials for own-account repair

Table 10.1 (continued)

Industry groupings

Grupperinger				Dansk branchekode 2003 (DB03)		
9	27	53	130			
5					Handel, hotel og restauration	Wholesale and retail trade; hotels, restaurants
5000	50000				Autohandel, service og tankstationer	Sale and repair of motor vehicles, sale of auto. fuel
		501009		111-standard	Autohandel	Sale of motor vehicles and motorcycles
		502000		111-standard	Autoreparation	Maintenance and repair of motor vehicles
		505000		111-standard	Tankstationer	Retail sale of automotive fuel
5100	51000	510000		27-standard	Engroshandel undtagen med biler	Wholesale except of motor vehicles
5200					Detailh. og reparationsvirks. undt. biler	Re. trade and repair work exc. of m. vehicles
	52109	521090		53-standard	Detailhandel med fødevarer mv.	Retail trade of food
	52299	522990		53-standard	Varehuse og stormagasiner	Department stores
	52300	523000		53-standard	Apoteker og materialister	Re. sale of phar. goods, cosmetic art.
	52419	524190		53-standard	Detailhandel med beklædning og fodtøj	Re. sale of clothing and footwear
	52449	524490		53-standard	Detailhandel i øvrigt, reparationsvirksomhed	Other retail sale, repair work
5500	55000				Hoteller og restauranter	Hotel and restaurants
		551009		111-standard	Hoteller	Hotels
		553009		111-standard	Restauranter	Restaurants
6					Transport, post og tele	Transport, post and telecommunication
6009					Transport	Transport
	60000				Land-, rørtransport	Land transport and transport via pipelines
		601000		601000	Jernbaner	Transport via railways
		602100		602100	Bus- og S-togstrafik mv., rutebart	Other scheduled passenger land transport
		602223		602200-602300	Taxi- og turistvognmænd	Taxi operation and coach services
		602409		111-standard	Fragtvognmænd mv., rørtransport	Freight transport by road and via pipelines
	61000	610000		53-standard	Skibsfart	Water transport
	62000	620000		53-standard	Lufttransport	Air transport
	63000				Hjælpevirksomhed til transport	Supporting transport activities
		631130		631100-633040	Hjælpevirksomhed i forb. med transport, rejsebureau	Cargo handling, harbours etc., travel agencies
		634000		634010-634090	Anden transportformidling	Activities of other transport agencies
6400	64000	640000		27-standard	Post og tele	Post and telecommunications
7					Finansiering og forretningsservice	Finance and business activities
6509					Finansiering og forsikring	Finance and insurance
	65000				Finansiering	Finance
		651000		111-standard	Pengeinstitutter	Financial institutions
		652000		111-standard	Realkreditinstitutter	Mortgage credit institutions
	66000				Forsikring	Insurance
		660102		660100-660290	Livs- og pensionsforsikring	Life insurance and pension funding
		660300		660310-660390	Anden forsikringsvirksomhed	Non-life insurance
	67000	670000		53-standard	Finansiell service	Activities auxiliary to finance
7009					Udlejning og ejendomsformidling	Letting and sale of real estate
	70000				Ejendomsudlejning og -formidling	Real estate activities
		701109		7011;7012;7031; 703210	Ejendomsrådgivningsvirksomhed mv.	Real estate agents etc.
		702009		702010-702030; 703220	Boliger	Dwellings
		702040		702040	Udlejning af erhvervsjendomme mv.	Letting of non-residential buildings
	71000	710000			Udlejning af transportmidler og maskiner	Renting of transport equipment and machinery

Table 10.1 (continued)

Industry groupings

Grupperinger				Dansk branchekode 2003 (DB03)	
9	27	53	130		
7209					Business activities
	72000				Computer and related activities
		721009	It-service bortset fra levering af software	721,723-726	Computer activities exc. software consultancy and supply
		722000	Levering af programmel og konsulentbistand i forb. med software	722000	Software consultancy and supply
	73000				Research and development
		730001	Forskning og udvikling (markedsførelse)	NR-definition	Research and development (market)
		730002	Forskning og udvikling (anden ikke-markedsførelse)	NR-definition	Research and development (other non-market)
	74000				Consultancy and cleaning activities etc.
		741100	Advokatvirksomhed	111-standard	Legal activities
		741200	Revisions og bogføringsvirksomhed	111-standard	Accounting, book-keeping, auditing
		742009	Rådgivende ingeniører, arkitekter	111-standard	Consulting engineers, architects
		744000	Reklame og markedsføring	111-standard	Advertising
		747000	Rengøringsvirksomhed	111-standard	Building-cleaning activities
		748009	Anden forretningsservice	111-standard	Other business activities
8					Public and personal services
			Offentlige og personlige tjeneste		
	7500	75000			Public administration
			751100	Generel offentlig administration	111-standard
			751209	Offentlig sektoradministration bortset fra vedr. erhverv og infrastruktur mv.	7512;7514;7530
			751300	Offentlig administration vedrørende erhverv, infrastruktur mv.	751300
			752000	Forsvar, politi og retsvæsen	111-standard
	8000	80000			Education
			801000	Folkeskoler	111-standard
			802000	Gymnasier og erhvervsfaglige skoler	111-standard
			803000	Videregående uddannelsesinstitutioner	111-standard
			804001	Voksenundervisning mv. (markedsførelse)	NR-definition
			804002	Voksenundervisning mv. (anden ikke-markedsførelse)	NR-definition
	8519	85109			Health care activities
			851100	Hospitaler	111-standard
			851209	Læger, tandlæger, dyrlæger	111-standard
	8539				Social institutions etc.
			Sociale institutioner		
		85319	853109	Sociale institutioner for børn og unge	53-standard ¹
		85329	853209	Sociale institutioner for voksne	53-standard ¹
	9009				Associations, culture and refuse disposal
		90000			Sewage and refuse disp. and similar act.
			900010	Kloakvæsen og rensningsanlæg	900100
			900020	Renovation og renholdelse	900210, 900310
			900030	Lossepladser og forbrændingsanstalter	900220, 900320
		91000	910000	Organisationer og foreninger	53-standard
		92000			Activities of membership organizations
			920001	Forlystelser, kultur og sport (markedsførelse)	NR-definition
			920002	Forlystelser, kultur og sport (anden ikke-markedsførelse)	NR-definition
		93009			Recreational, cultural, sporting activities
			930009	Servicevirksomhed i øvrigt	9300
			950000	Private husholdninger med ansat medhjælp	950000
					Other service activities
					Other service activities
					Private households with employed persons

¹ I input-out-put tabellens 53-standard indgår 85.31.30 Institutioner for stofmisbrugere og alkoholskadede i gruppen 85.31.09 Social institutioner mv.

for børn og unge, medens den i nationalregnskabet medregnes i 85.32.09 Sociale institutioner mv. for voksne.

10.1 Classifications used for the income approach

Classifications used for GDP compiled by the income approach are the same as classifications used for GDP compiled by the production approach.

Compensation of employees, other taxes on production and imports and other subsidies on production, are all compiled at the national accounts 130 industry level, cf. section 10.1. Therefore, gross operating surplus and mixed income are also compiled at this level.

Consumption of fixed capital is compiled at the national accounts 53 industry level, cf. section 10.1, as this is the most detailed breakdown of gross fixed capital formation.

10.2 Classifications used for the expenditure approach

Table 10.2 shows the classifications of *household final consumption expenditure* used in the Danish national accounts and Table 10.3 the link between these consumption groups at the most detailed 72-level and COICOP at 4-digit level.

Table 10.2 Classifications used for household final consumption expenditure

Groupings				
13	41	72	Durability	
10	110		Fødevarer	Food
		1110	IV Mel, gryn, brød og kager	Bread and cereals
		1120	IV Kød	Meat
		1130	IV Fisk	Fish
		1141	IV Æg	Eggs
		1142	IV Mælk, fløde, yoghurt mv.	Milk, cream, yoghurt etc.
		1143	IV Ost	Cheese
		1150	IV Smør, margarine og olie mv.	Butter, oils and fats
		1160	IV Frugt og grøntsager	Fruit and vegetables except potatoes
		1171	IV Kartoffler mv.	Potatoes etc.
		1181	IV Sukker	Sugar
		1182	IV Flødeis, chokolade og sukkervarer	Ice cream, chocolate and confectionery
		1190	IV Salt, krydderier, supper mv.	Food products n.e.c.
20			Drikkevarer og tobak	Beverages and tobacco
	120		Ikke-alkoholiske drikkevarer	Non-alcoholic beverages
		1210	IV Kaffe, the og kakao	Coffee, tea and cocoa
		1220	IV Mineralvand og sodavand	Mineral waters, soft drinks and juices
	210		Alkoholiske drikkevarer	Alcoholic beverages
		2110	IV Vin og spiritus	Wine and spirits
		2130	IV Øl	Beer
	220	2210	IV Tobak	Tobacco
30			Beklædning og fodtøj	Clothing and footwear
	310		Beklædning	Clothing
		3110	HV Beklædning	Garments and clothing materials etc.
		3140	T Vask, rensning	Laundering, dry cleaning etc.
	320	3200	HV Fodtøj	Footwear
40			Boligbenyttelse	Housing
	410	4100	T Husleje	Actual rentals for housing

420	4200	T	Beregnet husleje af egen bolig	Imputed rentals for housing
430	4300	T	Reparation og vedligeholdelse af boliger	Regular maintenance and repair of the dwelling
440			Tjenester i forb. med boliger	Other services relating to the dwelling
	4410	T	Renovation mv.	Refuse collection, other services n.e.c.
	4430	T	Vand og vandafledningsafgift	Water supply and sewerage services
45	450		Elektricitet og brændsel	Electricity, gas and other fuels
	4510	IV	Elektricitet	Electricity
	4520	IV	Gas	Gas
	4530	IV	Flydende brændsel	Liquid fuels
	4540	IV	Fjernvarme mv.	Hot water, steam etc.
50			Boligudstyr, husholdningstjenester mv.	Furnishing, household equipment etc.
510	5100	V	Møbler og gulvtæpper mv.	Furniture, furnishings, carpets etc.
520	5200	HV	Gardiner, sengelinned mv.	Household textiles
530			Husholdningsmaskiner mv.	Major household appliances and repairs
	5310	V	Husholdningsmaskiner	Major household appliances
	5330	T	Reparation af husholdningsmaskiner	Repair of major household appliances
540	5400	HV	Service, køkkenudstyr	Glass, tableware and household utensils
550	5500	HV	Husholdnings- og haveredskaber	Tools and equipment for house and garden
560			Andre varer og tjenester til husholdningen	Goods and services for routine household maintenance
	5610	IV	Rengøringsmidler mv.	Non-durable household goods
	5620	T	Hushjælp mv.	Domestic services and home care services
60			Medicin, lægeudgifter o.l.	Medical products, health services
610			Medicin, vitaminer, briller mv.	Medical products, appliances and equipment
	6111	IV	Medicin, vitaminer mv.	Medical and pharmaceutical products
	6112	V	Briller, høreapparater mv.	Therapeutic appliances and equipment
620	6200	T	Læge, tandlæge mv.	Out-patient services
630	6300	T	Hospitaler, sanatorier	Hospital services
71	710	7100	V Anskaffelse af køretøjer	Purchase of vehicles
79			Anden transport og kommunikation	Other transport and communication
720			Drift af individuelle transportmidler	Operation of personal transport equipment
	7210	T	Vedligeholdelse af køretøjer	Maintenance and repairs of motor vehicles
	7220	IV	Benzin og olie til køretøjer	Fuels and lubricants
	7240	T	Biludlejning, køretimer mv.	Other services in respect of personal transport equipment
730	7300	T	Køb af transporttydelser	Transport services
810	8100	T	Telefon, telefax og porto mv.	Communications
91			Fritidsudstyr, underholdning og rejser	Recreation and culture
910			Elektronisk fritidsudstyr mv.	Audio-visual, photographic and data proc. equipment etc.
	9110	V	Radio- og tv-apparater mv.	Radio and television sets etc.
	9120	V	Fotoudstyr, videokameraer mv.	Photographic equipment etc.
	9130	V	Pc'ere mv.	Data processing equipment
	9140	HV	Cd'ere, videobånd mv.	Recording media for pictures and sound
	9150	T	Reparation af radio, tv, pc mv.	Repair of a/v and data processing equipment
920	9200	V	Musikinstrumenter, både mv.	Other major durables for recreation and culture
930	9300	HV	Sportsudstyr, legetøj, kæledyr mv.	Other recreational items and equipment
940	9400	T	Forlystelser, tv-licens mv.	Recreational and cultural services
950			Bøger, blade, papir mv.	Newspapers, books and stationery
	9510	IV	Bøger, aviser og blade	Books, newspapers and periodicals
	9530	HV	Papir og skriveudstyr mv.	Stationery and drawing materials etc.
960	9600	T	Pakkede ferierejser	Package holidays
97			Andre varer og tjenester	Other goods and services
970	9700	T	Undervisning	Education
981	9810	T	Udgifter på restauranter mv.	Catering
982	9820	T	Udgifter til hoteller mv.	Accommodation services

991		Personligt pleje		Personal care
	9911	T	Frisører mv.	Hairdressing salons etc.
	9912	HV	Toiletartikler, barbermaskiner mv.	Appliances, articles and products for personal care
992		Personlige effekter		Personal effects n.e.c.
	9921	V	Smykker og ure mv.	Jewellery, clocks and watches
	9922	HV	Kuffertter, tasker mv.	Other personal effects
993		Sociale foranstaltninger		Social protection services
	9931	T	Plejehjem, dagcentre mv.	Retirement homes, day-care centres etc.
	9932	T	Daginstitutioner for børn	Kindergartens, creches etc.
994	9940	T	Forsikring	Insurance
995	9950	T	Finansielle tjenesteydelser	Financial services n.e.c.
996	9960	T	Advokater, andre tjenesteydelser	Other services n.e.c.
99		Turistbalance		Balance of tourism, net
998	9980		Turistindtægter mv.	Consumption of non-residents on the economic territory
999	9990		Turistudgifter mv.	Consumption of residents in the ROW
		V	Varige	Durable
		HV	Halvvarige	Semi-durable
		IV	Ikke varige	Non-durable
		T	Tjenester	Services

Table 10.3 Link between consumption grouping and COICOP

Main group	Consumption group	Durability	Text	4-digit COICOP
10	110		Food	
	1110	IV	Bread and cereals	0111
	1120	IV	Meat	0112
	1130	IV	Fish	0113
	1141	IV	Eggs	0114 (part)
	1142	IV	Milk, cream, yoghurt etc.	0114 (part)
	1143	IV	Cheese	0114 (part)
	1150	IV	Butter, oils and fats	0115
	1160	IV	Fruit and vegetables except potatoes	0116
	1160	IV	Fruit and vegetables except potatoes	0117 (part)
	1171	IV	Potatoes etc.	0117 (part)
	1181	IV	Sugar	0118 (part)
	1182	IV	Ice cream, chocolate and confectionery	0118 (part)
	1190	IV	Food products n.e.c.	0119
20	120		Non-alcoholic beverages	
	1210	IV	Coffee, tea and cocoa	0121
	1220	IV	Mineral waters, soft drinks and juices	0122
20	210		Alcoholic beverages	
	2110	IV	Wine and spirits	0211
	2110	IV	Wine and spirits	0212
	2130	IV	Beer	0213

20	220		Tobacco	
	2210	IV	Tobacco	0220
30	310		Clothing	
	3110	HV	Garments and clothing materials, etc.	0311
	3110	HV	Garments and clothing materials, etc.	0312
	3110	HV	Garments and clothing materials, etc.	0313
	3110	HV	Garments and clothing materials, etc.	0314 (part)
	3140	T	Laundering, dry cleaning, etc.	0314 (part)
30	320		Footwear	
	3200	HV	Footwear	0321
	3200	HV	Footwear	0322
40	410		Housing	
	4100	T	Housing	0411
	4100	T	Housing	0412
40	420		Imputed rentals for housing	
	4200	T	Imputed rentals for housing	0421
	4200	T	Imputed rentals for housing	0422
40	430		Regular maintenance and repair of the dwelling	
	4300	T	Regular maintenance and repair of the dwelling	0431
	4300	T	Regular maintenance and repair of the dwelling	0432
40	440		Other services relating to the dwelling	
	4410	T	Refuse collection, other services n.e.c.	0442
	4410	T	Refuse collection, other services n.e.c.	0443
	4410	T	Refuse collection, other services n.e.c.	0444
	4430	T	Water supply and sewerage services	0441
45	450		Electricity, gas and other fuels	
	4510	IV	Electricity	0451
	4520	IV	Gas	0452
	4530	IV	Liquid fuels	0453
	4540	IV	Hot water, steam, etc.	0454
	4540	IV	Hot water, steam, etc.	0455
50	510		Furniture, furnishings, carpets, etc.	
	5100	V	Furniture, furnishings, carpets, etc.	0511
	5100	V	Furniture, furnishings, carpets, etc.	0512
	5100	V	Furniture, furnishings, carpets, etc.	0513
50	520		Household textiles	
	5200	HV	Household textiles	0520
50	530		Major household appliances and repairs	
	5310	V	Major household appliances	0531
	5310	V	Major household appliances	0532
	5330	T	Repair of major household appliances	0533
50	540		Glass, tableware and household utensils	
	5400	HV	Glass, tableware and household utensils	0540

50	550		Tools and equipment for house and garden	
	5500	HV	Tools and equipment for house and garden	0551
	5500	HV	Tools and equipment for house and garden	0552
50	560		Goods and services for routine household maintenance	
	5610	IV	Non-durable household goods	0561
	5620	T	Domestic services and home care services	0562
60	610		Medical products, appliances and equipment	
	6111	IV	Medical and pharmaceutical products	0611
	6111	IV	Medical and pharmaceutical products	0612
	6112	V	Therapeutic appliances and equipment	0613
60	620		Out-patient services	
	6200	T	Out-patient services	0621
	6200	T	Out-patient services	0622
	6200	T	Out-patient services	0623
60	630		Hospital services	
	6300	T	Hospital services	0630
71	710		Purchase of vehicles	
	7100	V	Purchase of vehicles	0711
	7100	V	Purchase of vehicles	0712
	7100	V	Purchase of vehicles	0713
	7100	V	Purchase of vehicles	0714
79	720		Operation of personal transport equipment	
	7210	T	Maintenance and repairs of motor vehicles	0721
	7210	T	Maintenance and repairs of motor vehicles	0723
	7220	IV	Fuels and lubricants	0722
	7240	T	Other services in respect of personal transport equipment	0724
79	730		Transport services	
	7300	T	Transport services	0731
	7300	T	Transport services	0732
	7300	T	Transport services	0733
	7300	T	Transport services	0734
	7300	T	Transport services	0735
	7300	T	Transport services	0736
79	810		Communication	
	8100	T	Communications	0810
				0820
				0830
90	910		Audio-visual, photographic and data proc. equipment etc.	
	9110	V	Radio and television sets etc.	0911
	9120	V	Photographic equipment etc.	0912
	9130	V	Data processing equipment	0913
	9140	HV	Recording media for pictures and sound	0914

	9150	T	Repair of a/v and data processing equipment	0915
90	920		Other major durables for recreation and culture	
	9200	V	Other major durables for recreation and culture	0921
	9200	V	Other major durables for recreation and culture	0922
	9200	V	Other major durables for recreation and culture	0923
90	930		Other recreational items and equipment	
	9300	HV	Other recreational items and equipment	0931
	9300	HV	Other recreational items and equipment	0932
	9300	HV	Other recreational items and equipment	0933
	9300	HV	Other recreational items and equipment	0934
	9300	HV	Other recreational items and equipment	0935
90	940		Recreational and cultural services	
	9400	T	Recreational and cultural services	0941
				0942
				0943
90	950		Newspapers, books and stationery	
	9510	IV	Books, newspapers and periodicals	0951
	9510	IV	Books, newspapers and periodicals	0952
	9530	HV	Stationery and drawing materials etc.	0953
	9530	HV	Stationery and drawing materials etc.	0954
90	960		Package holidays	
	9600	T	Package holidays	0960
98	970		Education	
	9700	T	Education	1010
	9700	T	Education	1020
	9700	T	Education	1030
	9700	T	Education	1040
	9700	T	Education	1050
98	981		Catering	
	9810	T	Catering	1111
				1112
98	982		Accommodation services	
	9820	T	Accommodation services	1120
98	991		Personal care	
	9911	T	Hairdressing salons etc.	1211
	9912	HV	Appliances, articles and products for personal care	1212
	9912	HV	Appliances, articles and products for personal care	1213
98	992		Personal effect n.e.c.	
	9921	V	Jewellery, clocks and watches	1231
	9922	HV	Other personal effects	1232
98	993		Social protection services	
	9931	T	Retirement homes, day-care centres etc.	1240 (part)
	9932	T	Kindergartens, crèches etc.	1240 (part)

98	994		Insurance	
	9940	T	Insurance	1251
	9940	T	Insurance	1252
	9940	T	Insurance	1253
	9940	T	Insurance	1254
	9940	T	Insurance	1255
98	995		Financial services n.e.c.	
	9950	T	Financial services n.e.c.	1262
				1261
98	996		Other services n.e.c.	
	9960	T	Other services n.e.c.	1270
99	998		Consumption of non-residents on the economic territory	
	9980		Consumption of non-residents on the economic territory	
99	999		Consumption of residents in the ROW	
	9990		Consumption of residents in the ROW	

Government final consumption expenditure is classified according to COFOG. However, as part of the national accounts, it is only published divided between individual and collective consumption expenditure. As part of the publication of government finances, which is also according to national accounts principles, government consumption expenditure is published at 10 COFOG groupings, cf. table 10.4:

Table 10.4: Government final consumption expenditure according to COFOG

1	General public services
2	Defence
3	Public order and safety
4	Economic affairs
5	Environmental protection
6	Housing and community amenities
7	Health
8	Recreation, culture and religion
9	Education
10	Social protection

Gross fixed capital formation is classified according to activity and type of assets. The activity classification is at the national accounts 53 industry level, cf. section 10.1. The type of asset classification is shown in table 10.5:

Table 10.5: GFCF classified by type of asset.

1	Machinery and equipment
2	Transport equipment
3	Buildings, dwellings
4	Buildings, other buildings
5	Civil engineering works
6	Livestock
7	Valuables, net
8	Purchased and own account software
9	Entertainment, literary or artistic originals
10	Mineral exploration

No standard classifications are used for other expenditure components.

10.3 Classifications used in the transition from GDP to GNI

No other standard classifications than those given in ESA95 are used for compiling the transition from GDP to GNI. However, as mentioned in chapter 8, Denmark's contribution to the EU based on VAT is not recorded as taxes paid to the EU in our national publication. Therefore a correction is made in the GNI-questionnaire, so that GNI for own resource purposes treats VAT to the EU as taxes paid to the rest of the world.

11. Main data sources used

Statistics Denmark publishes so-called "Declarations of content" on the internet. These "Declarations of content" describe statistics published and follow a standard structure:

0. Administrative Information about the Statistical Product
1. Contents
2. Time
3. Accuracy
4. Comparability
5. Accessibility
6. Supplementary documentation

In the following sections describing sources used for compiling GDP according to the production approach, the income approach and the expenditure approach, the declarations of content for the main sources are shown.

11.0 Statistical surveys and other data sources used for the production approach

The main sources used for compiling GDP from the production approach are:

- Economic Accounts for Agriculture
- Industrial Accounts Statistics
- Supplemental Accounting Statistics for Shipping
- Accounting Statistics for public corporations
- General Government

Economic Accounts for Agriculture

This declaration was transferred to the Internet on 10 August 2006

0 Administrative Information about the Statistical Product

0.1 Name

Economic Accounts for Agriculture.

0.2 Subject Area

Agriculture

0.3 Responsible Authority, Office, Person, etc.

Agriculture.

Ole Olsen, phone: +45 39 17 33 81, e-mail: olo@dst.dk

0.4 Purpose and History

The purpose of the statistics is to compile the Economic Accounts for Agriculture. The accounts serve as input to the National Accounts.

Economic Accounts for Agriculture exist back to at least 1935. Different attempts to calculate agricultural accounts backwards in time have been made, and a time series for Economic Accounts for Agriculture back to 1818 is published in the publication: *Svend Aage Hansen: Økonomisk vækst i Danmark II*. (Economic growth in Denmark).

0.5 Users and Application

The main users are agricultural organizations and the EU. The statistics are used in compiling the National Accounts.

0.6 Sources

The Economic Accounts for Agriculture consist of data on values of agricultural production and intermediate consumption. In the production values results from a wide range of production statistics compiled by Statistics Denmark are used. These contain statistics from annual surveys on the harvest of cereals, rape and pulses and the harvest of grass and green fodder and ad hoc surveys of outdoor vegetables, greenhouse crops, fruit and berries. Furthermore, animal production statistics are used.

In calculating intermediate consumption several different statistics compiled by Statistics Denmark are used. These include statistics on production of compound feeds, statistics on supply and use of feed, statistics on the use of cereals and statistics on production and use of straw.

Furthermore, a wide range of external sources are used including the Finance Act, information from the Directorate for Food, Fisheries and Agri-Business on subsidy payments to agriculture and agricultural accounts statistics from the Danish Research Institute of Food Economics.

0.7 Legal Authority to Collect Data

As mentioned above, the Economic Accounts for Agriculture use the results of several agricultural statistics compiled by Statistics Denmark, each one having their own legal authority to collect data. Please refer to the declarations of contents for these statistics.

0.8 Response burden

Irrelevant in this survey

0.9 EU Regulation

Until 2003 Council Directive 130/1989. Hereinafter legal act 138/2004 from Parliament and Council on Economic Accounts for Agriculture.

1 Contents

1.1 Description of Contents

The Economic Accounts for Agriculture form the basis of the agricultural part of the National Accounts. The bottom line of the statistics is the gross value added at factor prices, which measures the income available for the input of labour and capital, including depreciation, return to internal and debt capital, compensation of employees and return to the farmer.

The Economic Accounts for Agriculture can be split up into the following headings:

- Value of agricultural sales ex producer
- Income from agricultural services
- Income from inseparable non-agricultural secondary activities
- Value of changes in stocks
- Intermediate consumption
- Gross value added at producer prices
- Subsidies and taxes on products
- Gross value added at basic prices
- General subsidies and taxes
- Gross value added at factor prices

1.2 Statistical Concepts

Population:

The aim of the statistics is to measure the commercial result of the extended agricultural sector, including agriculture, horticulture, fur-breeding, hunting and bee-keeping.

For further information on the statistics mentioned in item 0.6, please see the Declarations of Contents, which are included in the calculation of Economic Accounts for Agriculture.

The basis for compiling the statistics is described below:

EU harmonized statistics

The compilation is based on a range of definitions and calculation methods, which are described in the publication *Håndbog i brancheregnskaber for landbrug og skovbrug*, Eurostat, Luxembourg 2001 (Manual on Economic Accounts for Agriculture and Forestry, 2001). The essence of this methodological description is part of an EU Regulation (138/2004), which Statistics Denmark is now also formally obliged to comply with, when reporting data to the EU.

The principle: the kind of economic activity unit

The compiling of production is, in principle, conducted EU for each individual production activity performed in agriculture. This

implies, in practice, that the part of vegetable production, which is used internally in agriculture as feeding stuffs for animals, is now also included in the value of agricultural sales products (income), as well as intermediate consumption (costs). The internal turnover comprises both the consumption of own products by each farm and the consumption of feedings stuffs purchased from other farms.

The production also covers agricultural services and secondary activities, which cannot be distinguished from the primary production.

Compilation of EAA

Economic Accounts for Agriculture is calculated in accordance with the compilation method applied contains the following items:

- + Total value of agricultural sales ex producer
- + Total income from agricultural services
- + Income from non-agricultural secondary activities
- + Total value of stock changes at producers
- Total intermediate consumption
- = Gross value added at producer prices
- + Subsidies on products
- Taxes and duties on products
- = Gross value added at basic prices
- + General subsidies
- General taxes and duties
- = Gross domestic product at factor costprices.

Value of sales products

Sales values are generally estimated on the basis of quantities sold and average sales prices, exclusive of subsidies and inclusive of duties.

The sales values indicated exclude producers yield from the schemes and support measures, which result in direct payments. The product duties paid by producers are set off in the sales values.

Crop products

Internal sales

For crop products, which are used as feeding stuffs for livestock, the value of internal sales in agriculture of the sales values indicated is included. Internal sales cover sales between agricultural holdings as well as products produced and used as feeding stuffs by each individual agricultural holding. Internal sales are compiled on the basis of product balances prepared by Statistics Denmark and combined with information from the accounts of the Danish Research Institute of Food Economics. It should be noted that internal sales are also included in intermediate consumption.

Cereals

The sales value of cereals covers total sales of cereals to other industries as well as internal sales of cereals in agriculture. Invoiced prices for fodder cereals combined with official prices of barley and wheat are applied in valuing internal sales.

Pulses

The sales value is estimated on the basis of the total harvest of field peas and other pulses, when shrinkage has taken place. The quantity harvested is valued by using average settlement prices, which have been calculated by major cereal and feeding stuff merchants. The sales value also covers internal sales of pulses.

Potatoes

The value of the production of potatoes is estimated as total sum of the value of potatoes for human consumption, potatoes for production flour, for other production, for exports and for domestic use, e.g. seed potatoes. Prices ex producer are collected or estimated, which are included in the valuation. The sales value also covers internal sales of potatoes.

Seeds for sowing

The quantity is estimated by the Danish Plant Directorate as the total harvest, and the prices are breeders prices submitted by the Danish Association of Seed Growers.

Seeds for industrial use

The production value is estimated as the total harvest multiplied by average settlement prices calculated by the Federation of Danish Seed Growers and the Association of Danish Garden Seed Retailers. It is assumed that 10 pct. of the total quantity of rape seed grain is made up by seeds for sowing from own production, and this part is, consequently, deducted from the sales quantity. Correspondingly, the purchases of rape seed grain are reduced by this quantity.

Sugar beets

The sales value of sugar beets is estimated on the basis of the quantities purchased by the sugar beet factories, settled prices for sugar beets, and any deferred payments to producers. As far as sugar beets are concerned, there is one exception from the

principle of including taxes on products, which is that the elimination levies are deducted from the prices.

Horticultural products

The estimates of valuing horticultural products are based on the development at the first distributive stage, with respect to values, prices and quantities. Information on values is primarily collected from the Marketing Board for Market Garden Produce. The value of nursery products is based on the accounts statistics compiled by the Danish Research Institute of Food Economics, as retail sales are in this context excluded from the statistics. Information on the production value of tinned peas, which are included in free-range vegetables as from 2000, is submitted by manufacturers.

Christmas trees

The value of the production of Christmas trees on agricultural land is estimated on the basis of information from the agricultural accounts statistics compiled by the Danish Research Institute of Food Economics.

Fodder beet, straw, grass and green fodder

Internal sales account for the predominant part of the value of fodder beets, fodder straw, grass and green fodder. The remaining part consists of mainly products, which are sold for industrial use in producing alfalfa flour, grass flour and green pills. Up to and including 1999, an estimated price of DKK 1.00 per fodder unit was applied in pricing internal sales. As from 2000, the price is adjusted to DKK 0.90, see the calculations made by the Danish Agricultural Advisory Centre.

Other crop products

Other crop products comprise primarily straw, which is used in the manufacturing industry and for heating. The quantities are based on the harvest survey.

Animal products

Meat and live animals

The sales value of meat and live animals comprises for each species of animals, animals slaughtered in placecountry-regionDenmark as well as the value ex producers for exports of live slaughtered animals. Furthermore, the sales value of breeding animals and work-animals ex producer for animals that are exported are included, while the sales of these animals between farmers are excluded, although these sales take place via middlemen (e.g. sales of piglets).

Natural milk

The sales value of natural milk covers the value of the total weighed milk volume at the dairies, producers own consumption and sales directly to the consumers. The figures stated are indicative of the sales values that have been achieved, inclusive of any supra-duties levied in accordance with the milk quota schemes and the general taxes on production, etc.

Eggs

The sales value of eggs for human consumption covers sales of hens eggs for human consumption, including producers own consumption and sales of eggs for consumption directly to the consumers.

Furred animals

The Danish Fur Breeders Asscoation estimates the annual production of skin and the value is arrived at by using average auction prices (knocked down prices) less producers sales duties.

Other animal products

Other animal products cover sales of honey, wool and rabbits for slaughtering.

Agricultural services and secondary activities.

Agricultural services

The value of agricultural services covers own income of the holding derived from services provided at machine pools and rental of milk quotas. The statistical data on income from services provided at machine pools are based on information from the accounts statistics compiled by the Danish Research Institute of Food Economics, while the statistical data of rental of milk quotas are based on information from the Danish Dairy Board.

Secondary activities

The "inseparable non-agricultural secondary activities" cover income from rental of non-independent assessed dwellings, income from tourism and income from rental of land for hunting, income from boarding of animals and various inseparable income. The statistical data on secondary activities are based on information from the accounts statistics compiled by the Danish Research Institute of Food Economics.

Stock changes at producers

General principles

The value of stock changes at producers is estimated on the basis of a separate calculation for each of the periods for which a quantitative calculation of the changes can be made. In estimating the value, weighed average sales prices are used during the period, and the value for the whole year is estimated as the sum of the value of changes in each individual period.

Cereals

For cereals the annual stock changes of agricultural products are estimated for the entire period taken as a whole, and the reference period is due to indirect calculations subject to some margins of statistical uncertainty for the most recent years. In estimating the value, weighed average sales prices are used during the entire period.

Other crop products

For other crop products, including horticultural products and coarse fodder, statistics on stock changes are not compiled.

Stock changes

Stock changes of pigs and cattle are estimated on the basis of changes in the periods between quarterly surveys. Until the 3rd quarter 2001, changes of cattle are estimated on the basis of semi-annual surveys. Stock changes of sheep, horses and furred animals are based on annual surveys. The values are estimated by using average prices over the period in which the stock changes are estimated.

Intermediate consumption

Definition

Intermediate consumption covers total purchases of agricultural purchases of raw and auxiliary materials related to intermediate consumption, including purchases from middlemen, etc. crop products used internally, expenditure on repair and maintenance of production facilities, expenditure on agricultural services (including machine pools) and expenditure on services provided by other industries.

General principles

If there are any available quantity and price data on the raw and auxiliary materials used, expenditure is estimated on the basis of the total purchases and the average prices paid for each individual raw and auxiliary material, while information from existing accounts statistics and information from different special statistics are used in the calculation of the other items of expenditure.

Seeds for sowing

The consumption comprises seeds for sowing and seeds sold to the agricultural sector and estimated expenditure on seed potatoes. For horticultural holdings, expenditure on planting stocks is included, which is based on information from the accounts statistics compiled by the Danish Research Institute of Food Economics.

Feeding stuffs

Expenditure on feeding stuffs is estimated on the basis of purchases of straight feeding stuffs and compound feeding stuffs and the actual prices paid by farmers for the products supplied. The internal use of feeding stuffs of crop products, including cereals and coarse fodder, is included in the calculation of expenditure as preliminary figures for the most recent year.

Returned milk

Expenditure on returned milk for feeding stuffs comprises the repurchasing of skimmed milk, buttermilk and whey.

Other purchases of feeding stuffs

Expenditure on other purchases of feeding stuffs comprises, e.g. purchases of molasses, feed yeast, pulp, mash and sediment, as well as different imported vegetable feeding stuffs, e.g. tapioca flour and citric pomace, etc.

Commercial fertilizers

Expenditure on commercial fertilizers is estimated as the value of the total consumption of fertilizers in placecountry-regionDenmark, together with a roughly estimated deduction of 3 pct., covering consumption outside the agricultural and horticultural sector. The consumption of fertilizers is estimated by the Plant Directorate. Prices are based on information from the Danish Cooperative Farm Supply and Kemira GrowHow, which are assumed to represent prices supplied to farmers. Expenditure on chalk and marl is based on information from the accounts statistics compiled by the Danish Research Institute of Food Economics.

Pesticides

Expenditure on pesticides is estimated on the basis of information from the accounts statistics compiled by the Danish Research Institute of Food Economics. Duties levied on pesticides are included in the expenditure on pesticides.

Energy

Expenditure on energy is estimated on the basis of information from the accounts statistics compiled by the Danish Research Institute of Food Economics. Expenditure comprises the total commercial consumption of electricity and fuels in agriculture and horticulture, including consumption of energy for the commercial use of private cars. Duties levied on energy are included in the expenditure on energy.

Repair and maintenance

Expenditure on repairs and maintenance is estimated on the basis of information from the accounts statistics compiled by the Danish Research Institute of Food Economics. Expenditure comprises farm buildings, production plants, machines and tools, as well as repair and maintenance soil improvement and land reclamation.

Other raw and auxiliary materials

Expenditure on raw and auxiliary materials is estimated on the basis of information from the accounts statistics compiled by the Danish Research Institute of Food Economics. Expenditure comprises pots, growth containers, growth media and carbon dioxide.

Agricultural services

Expenditure on agricultural service comprises expenditure on machine pools and rental of milk quotas. The statistics showing expenditure on machine pools are compiled on the basis information from the accounts statistics compiled by the Danish Research Institute of Food Economics, while the rental of milk quotas is based on information from the Danish Dairy Board.

Indirect bank charges

As the result of revised principles for the statistics on the Danish National Accounts, the part of bank receipts due to the difference between paid/unpaid interests and a reference as a production, is compiled. Consequently, the industries share of this is to be included as intermediate consumption. The statistics are indirect.

Services from other industries

Expenditure on services from other industries comprises insurance services, agricultures commercial share of costs on private cars, expenditure on packaging, duties on piped water, costs concerning plant growing, animal production, including expenditure on veterinary services and services provided by surveillance associations, as well as various costs. Except for the statistics on insurance services, the statistics showing expenditure on services from other industries are based on information from the accounts statistics compiled by the Danish Research Institute of Food Economics.

Insurance services are, in principle, estimated as the difference between paid gross premiums and paid-out insurances. The statistics are based on Statistics Denmark's information on premiums and payments of business-related insurances, as well as the statistics compiled by the Danish Research Institute of Food Economics.

Operation subsidies, taxes and duties

Subsidies on products and general products, taxes and duties

The statistics distinguish between subsidies on products and general operation subsidies, taxes and duties. In this way, it is possible to estimate income in the 3 income concepts: gross value added at producer prices, gross value added at basic prices and gross value added at factor cost. There is the following relationship between the income concepts: If we take gross value added at producer prices as starting point and subsidies on products are added and taxes and duties on products are deducted, gross value added at basis prices are obtained. If the general subsidies are added and general taxes and duties are deducted, gross value added at factor cost is obtained.

Definition of subsidies

In accordance with the general rules for which subsidies that are to be referred to gross value added at factor cost, such transfers from the government and the EU are included, whose purpose is to influence prices and/or make it possible for the production factors to achieve a reasonable remuneration. The characteristic feature of the included subsidies is that they are partly operation subsidies, unlike one-off subsidies, partly subsidies that are, as a main rule, paid out directly to the farmers.

Operation subsidies for businesses engaged in the processing of agricultural products, which is made after the products have left the production unit are excluded from the gross value added at factor cost. The same applies to investment subsidies and other one-off subsidies.

Subsidies on products and general products

Aid per hectare in the form of support for production of cereals, oil seeds and pulses and various livestock premiums are included in the operation subsidies for products. The general subsidies include, e.g farm set-aside programmes and subsidies on organic agriculture. From 2005, a number of subsidies have been replaced by what is known as the single payment scheme, which is a general subsidy.

Taxes and duties

In the statistics, taxes and duties on products are included in the value of sales products or in consumption. Consequently, they are set off in the calculation of gross domestic product at factor cost. For the years shown, the item only covers the supra-duty on milk. Duties on energy and duties on pesticides are contained in the respective costs. General taxes and duties comprise property taxes and motor vehicle weight duty.

Data sources

The statistics on operation subsidies are primarily based on abstracts of payments and other information from the Directorate for Food, Fisheries and Agri Business. The statistics on property taxes are based on information from the Central Customs and Tax Administration.

2 Time

2.1 Reference Period

The reference period is 31 December.

2.2 Date of Publication

The statistics are usually published in May.

2.3 Punctuality

The date of publication may vary up to a month.

2.4 Frequency

Annual.

3 Accuracy

3.1 Overall accuracy

The statistics are compiled on the basis of several different sources, each contributing with statistical inaccuracies. The overall accuracy, however, is considered to be reasonable.

3.2 Sources of inaccuracy

As the statistics are compiled on the basis of a wide range of agricultural statistics, a significant number of sources of statistical errors are present, including problems involved in providing fully representative reference periods. For a more precise statement of these, please refer to the declarations of contents for the statistics mentioned in item 0.6.

On the other hand, a wide range of information is exact. This applies to, e.g. information from dairies and slaughterhouses, which have a great impact on the statistics.

When the statistics are published, some figures for the most recent year are provisional and the statistical inaccuracy is thus greater than for previous years.

3.3 Measures on accuracy

Margins of statistical error are not calculated because the combination of several sources, including other statistics.

4 Comparability

4.1 Comparability over Time

Comparable statistics on Economic Accounts for Agriculture at annual level are available back to 1990. As a consequence of the implementation of the new methodology in the National Accounts, ESA 1995, a new compilation method for gross domestic product at factor cost in agriculture was implemented in 2000 in accordance with internationally agreed guidelines. In 2005, it was decided to include indirect bank charges as intermediate consumption.

The statistics back to 1990 have been revised in accordance with the new methodology, and are available from Eurostat StatBank place country-region Denmark.

Except for indirect bank charges and secondary receipts, gross domestic product at factor cost has also been calculated the basis of the new methodology for the calendar years 1973-89. However, the new calculations are subject to some statistical uncertainty.

Comparable statistics compiled in line with the previously applied methodology (before the revision in 2000) are available for the period 1975-98 for calendar years and for the period 1975/76-1998/99, covering operation years.

4.2 Comparability with other Statistics

Examples of other statistics in the area are the annual publications "Agricultural Account Statistics" and "Horticultural Accounts Statistics" compiled by the Danish Research Institute of Food Economics dealing with the economic results in agriculture at farm level.

4.3 Coherence between provisional and final statistics

Between the provisional and final statistics results may vary up to 3 percent.

5 Accessibility

5.1 Forms of dissemination

The statistics are published in *Nyt fra Danmarks Statistik* (News from Statistics Denmark) and in *Landbrug* (Agriculture) appearing in the series *Statistiske Efterretninger* (Statistical News) and in the annual publication *Agriculture*.

www.statbank.dk

5.2 Basic material: Storage and usability

Please contact the person responsible.

5.3 Documentation

The internationally agreed methodology for the EAA is described in the Eurostat publication: *Manual on the Economic Accounts for Agriculture and forestry EAA/EAf 97 (Rev. 1.1), Luxembourg 2000*.

A description of the implementation of the methodology in the statistics is published in *Statistical News - Agriculture* and in the publication *Agriculture*.

5.4 Other Information

There is no other available information.

6. Supplementary Documentation

There is no supplementary documentation for this declaration of content

Industrial Accounts Statistics

This declaration was transferred to the Internet on 18 July 2005

0 Administrative Information about the Statistical Product

0.1 Name

Industrial accounts statistics.

0.2 Subject Area

General economic statistics

0.3 Responsible Authority, Office, Person, etc.

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0.4 Purpose and History

The purpose of Accounts statistics is to analyse the activity level and of the structure of the Danish business sector. This means that the statistics should be seen as a primary source of financial data for analytical studies of Danish business enterprises, including data required for the evaluation and conception of Government policies and decisions affecting the business community. Moreover, the accounts statistics are an essential input to the Danish national accounts statistics, and they provide the bulk of Denmark's contribution to EUROSTAT's structural business statistics at European level.

Until the late 1980's, Statistics Denmark produced questionnaire-based accounts statistics covering manufacturing industries, construction and the distributive trades. Apart from manufacturing, these statistics were discontinued after a new tax reporting system, called SLS-E, was introduced in 1986, whereby Danish business enterprises were ordered to submit to the tax authorities a standardised list of items from their accounts. These items were well suited for statistical purposes, but just a few years later the list of items was cut drastically and many firms were exempted from the system, so it became necessary to reintroduce statistical questionnaires and use the SLS-E data as a supplement only. Otherwise it would not have been possible to satisfy national and Eurostat requirements in the field of structural business statistics.

The new type of business accounts statistics started with the reference year 1994, covering construction and retail trade at the enterprise level. Manufacturing was added from 1995, when the former type of statistics for that sector was discontinued. At the establishment (i.e. workplace) level, regional statistics have been published since the reference year 1995, covering manufacturing, construction and retail trade.

Wholesale trade was added from 1998 and the remaining part of the private secondary and tertiary industries from 1999.

So results are published at the national level relating to enterprises (legal units) and from 1995 also at the regional level relating to workplaces.

0.5 Users and Application

Users: Public authorities, Eurostat, employers' and employees' federations, private firms, politicians, economists, journalists, students.

Applications: studies of business economics, regional finance studies, primary data for the Danish national accounts and for Eurostat's structural business statistics.

0.6 Sources

Questionnaires
The Central Customs and Tax Administration (SLS-E data)
The business register
The Drugs Administration Agency (pharmacy accounts)

0.7 Legal Authority to Collect Data

The Act on Statistics Denmark (Act no. 599 of 22 June 2000), § 8 and 12.

0.8 Response burden

In 2004 the response burden imposed on business enterprises in reporting data for the accounts statistics was estimated at 14,943 hours or 5.6 DKK mio.

0.9 EU Regulation

Council Regulation no. 58/97 on Structural Business Statistics (SBS) requires the EU countries to submit to Eurostat information regarding business revenues, expenditures, value added, employment, wages and salaries, investment, etc. In Denmark the bulk of this information is obtained from the accounts statistics.

1 Contents

1.1 Description of Contents

The new statistics of business accounts cover construction and retail trade from the reference year 1994 at enterprise level (i.e. for legal units, such as corporations and sole traders) and from the reference year 1995 at establishment (workplace) level. The coverage was extended to manufacturing industries from 1995, to wholesale trade from 1998, and to the remaining part of the service industries from 1999.

The statistics are essentially aggregations of items of the annual accounts of business enterprises, notably items of the profit and loss account, the balance sheet and the statement of fixed assets. Thus, a wide range of subjects are covered, e.g. turnover, purchases, expenses, profits, assets, liabilities and investment. Results are compiled and published at both enterprise and establishment level, including distributions according to kind of activity, form of ownership, size group and region.

The data collected from all sources are combined in such a way that a complete set of accounting items is computed for each business enterprise and its component units (establishments) in the survey population. The resulting survey files can easily yield alternative breakdowns and tabulations, in addition to those published.

1.2 Statistical Concepts

Enterprise

Usually corresponding to the legal unit, e.g. limited-liability corporations, sole traders, partnerships, etc.
In a few cases several legal units which are run as one entity are gathered into one enterprise.

Establishment

An enterprise or part of an enterprise, that is situated in a single location and produces one -- or mainly one -- sort of goods and services.

Kind of activity

This concept, which is sometimes termed branch or industry, refers to the 6-digit code numbers found in the Danish activity classification DB93 until 2002, and in DB03 from 2003. The activity classification is based on the European NACE nomenclature.

Form of ownership

Enterprises may be distinguished according to legal types, such as sole traders, partnerships, limited-liability corporations, government bodies, etc.

Size groups

In publications the size groups mostly refer to employment in terms of full-time equivalent persons. The most frequently used categories are 0-9, 10-19, 20-99 and 100+ employed persons (including working proprietors).

Regions

The regions used when publishing the accounts statistics at establishment level are the Danish counties ("amter").

Number of employees

Persons on the payroll in full-time equivalent units.

Number of persons employed

For corporations equal to number of employees. For sole traders etc. are added an estimated number of owners namely +1 for single proprietors/self employed and +2 for partnerships.

Accounting item:

These are the items derived from the financial accounts or bookkeeping systems of the business enterprises, such as turnover, cost of goods sold, expense items, assets, liabilities and capital expenditure.

Clarification of some of the used accounts items and concepts:

Turnover

Turnover represents the net sales. Included are capitalised work performed by the firm for own purposes and all charges (transport, packaging, etc.) passed on to the customer. Excluded are reduction in prices, rebates, discounts, VAT and excise duties. Income classified as other operating income, financial income and extraordinary income in company accounts is also excluded from turnover.

Other operating income

Secondary income.

Cost of goods consumed

Purchases of goods and energy plus/minus changes in stocks.

Value added

Turnover plus Other operating income minus consumption of goods and services.

Financial receipts

Receipts from interest, dividends, income from participating interests, profit due to appreciation and on exchanges.

Financial expenses

Interest payable and similar charges, depreciation etc. on financial current or fixed assets.

Fixed assets

Part of the capital of the enterprise which are meant to be kept e.g. land, buildings, machinery, equipment, patent, shares, and bonds.

Current assets

Stocks, debts receivable, cash.

Capital and reserves

The owners part of the capital of the enterprise. Is calculated as Total assets minus (Provisions for liabilities and charges plus Debts).

Provisions for liabilities and charges

Obligations where the exact amount or due date is not known with certainty, e.g. deferred taxation.

Short-term debts

Debts payable within 1 year.

Long-term debts

Debts payable later than 1 year.

Investment

Increase and decrease of assets. Increase (acquisitions) is stated at book value before any adjustments. Assets acquired through financial leasing are included. Decrease (disposals) is stated at selling price (if not known then the written-down value).

Value added (percent)

Value added in percent of Turnover and Other operating income.

Gross profit ratio

Turnover minus Cost of goods consumed minus Cost of subcontractors and other work done by others on your firm's materials measured in percent of Turnover.

Net profit ratio

Profit or loss before financial and extraordinary items measured in percent of Turnover and Other operating income.

Return on equity

Profit or loss for the financial year after Corporation tax measured in percent of the average of the Capital and reserves during the year.

Proprietary ratio

Capital and reserves measured in percent of Total liabilities.

Average

Is calculated for each industry (or size group etc.) using the accumulated figures for the relevant accounting items. The figures of large enterprises will weigh more than the figures of small enterprises.

Median

The enterprises are sorted according to their size of the relevant figure or ratio. The median is the figure or ratio of the enterprise which are placed exactly in the middle of this sequence. The figures of large enterprise will not weigh more than the figures of small enterprises.

2 Time

2.1 Reference Period

The accounts statistics for a given year, t , relate to annual accounts ending in the period from 1 May of year t to 30 April of year $t+1$.

2.2 Date of Publication

The statistics are scheduled to appear within 12 months after the end of the reference year (30 April).

2.3 Punctuality

The publications usually have been available about 14 months after the end of the reference year.

2.4 Frequency

Annual statistics, both at enterprise level and at establishment level (regional data).

3 Accuracy

3.1 Overall accuracy

The accounts statistics are a reliable indicator of the activity level and of the structure of the Danish business sector. The highest data quality is achieved at the enterprise level, primarily because the firms prepare their annual accounts at that level. But also at the establishment level the published results for major activity groups and for counties are deemed to be reliable in spite of some elements of uncertainty.

Remarks on data sources:

A. Direct surveying. The most thorough coverage is extended to the firms that are selected for direct surveying. They are given the choice of either filling in a lengthy questionnaire or submitting their annual accounts plus detailed specifications. The questionnaire is modelled on the list of items set out in the Danish annual accounts legislation, so as to facilitate responding. The data obtained by direct surveying are keyed into a data entry system which comprises error detection and verification procedures. Thus, the data are checked for accounting inconsistencies, and warning messages are written out if significant deviations are found when comparing with last year's data or with figures for firms in the same stratum (form of ownership / activity / size group). Frequently the respondents are contacted for clarification. The resulting data for the direct-surveyed firms are regarded as highly reliable. In terms of turnover these firms (including those of B below) accounted for 69 percent of the total for 2003.

B. Pharmacies. All Danish pharmacies must submit a standardised set of accounts to the Drugs Administration, which sends a file containing the audited accounts to Statistics Denmark. On some points the pharmacy accounts differ from the items of Statistics Denmark's questionnaire, but it is possible to estimate the missing data, so the overall quality is high.

C. The SLS-E system of the Danish tax authorities does not comprise so many items as Statistics Denmark's questionnaire, but the quality of the data is regarded as high, because they are used for individual tax assessment. By stratified imputation the data aggregates of the SLS-E system are distributed among the more detailed items, and in the opinion of Statistics Denmark the resulting item values are reasonably reliable for profit and loss account as well as balance sheet. Unfortunately, the SLS-E system does not include information about investment (spending on fixed capital), so this is a weak point. The firms contributed by the SLS-E system accounted for 19 percent of total turnover in the 2003 survey.

D. The rest. Many (especially small) firms are not covered by the sources A to C, so the available information is limited. Stratified imputation based on employment size groups is used to fill the gaps, but this method yields results with large margins of error. However, the firms of the "rest" population accounted for only 12 percent of turnover in the 2003 survey, so the negative effect on the overall quality of the accounts statistics is limited.

3.2 Sources of inaccuracy

The response rate for the sample population for reference year 2004 was 98 per cent.

Some items of the statistical questionnaire go beyond the level of disclosure prescribed by the annual accounts legislation. A case in point is the question concerning expenditure on fuel and energy. In those cases it is more difficult or more trouble for the

firms to provide the requested information, and it is likely that some underreporting occurs.

Investment is another subject which is not itemised in the annual accounts, but information on the subject can be deduced from a separate table in the notes to the accounts where acquisitions and disposals of fixed assets are specified. So investment too could be underreported to some extent by those respondents who fill in and return the questionnaires. Moreover, no investment information is available for the firms of the SLS-E and the "rest" groups, which means that for these firms the investment estimates are not entirely reliable.

The accounts statistics are less reliable at the establishment level than at the enterprise level because the allocation procedures are based on assumptions. But also at the establishment level the published results for major activity groups and for counties are deemed to be reliable.

3.3 Measures on accuracy

Starting with the reference year 1999, error bands are indicated with a 95 percent probability in table 2 of the annual national publication at enterprise level.

4 Comparability

4.1 Comparability over Time

At enterprise level, comparable statistics (time series) are available from 1994 for construction and retail trade, from 1995 for manufacturing industries, from 1998 for wholesale trade, and from 1999 for the remaining part of the private secondary and tertiary industries.

Starting with the reference year 2000 the estimation method has been changed for enterprises with no more than 1 employee (full-time equivalence) and from which there is no information from questionnaire or the SLS-E system. This change in estimation method is considered to make the data for these enterprises more reliable, but makes it more difficult to compare with previous years, in particular in sectors where this type of enterprise makes up a substantial part.

Starting with the reference year 2002 The Danish Law on Annual Reports was revised. Among the major changes can be mentioned:

- a) Intangibles and financial fixed assets and also assets acquired by financial leasing must to a higher extent than earlier be included in the balance sheet, and as a principal rule it must be valued at market prices, whereas earlier it could alternatively be valued at historical cost prices or the like.
- b) Work in progress, not for own account (contract work), is moved from current stocks to debts receivable.

The previous type of accounts statistics for manufacturing industries, which ended with the year 1994, covered all manufacturing enterprises with 20 or more employees. The new type of accounts statistics covers all enterprises irrespective of size. Consequently, the two types of statistics are not directly comparable.

At establishment level, comparable statistics are available from 1995 for construction, retail trade and manufacturing, from 1998 for wholesale trade, and from 1999 for the remaining part of the private secondary and tertiary industries.

The accounts statistics do not cover inactive businesses and primarily non-commercial enterprises. The threshold limit regarding the level of economic activity required, was raised substantially with effect from the reference year 1999. Consequently, the number of enterprises and establishments (workplaces) dropped considerably and the number of employed people dropped slightly. The effect on the economic variables relating to the accounting items was minimal.

4.2 Comparability with other Statistics

The new type of accounts statistics is largely comparable with, and supplemented by, the SLS-E based accounts statistics which were discontinued after 1998. Statistics Denmark publishes statistics on various subjects related to business accounts, notably VAT-related turnover, manufacturers' sales of commodities, and short-term statistics of order books and sales. However, these statistics are not directly comparable with the accounts statistics, because of differences in units, coverage or concepts.

4.3 Coherence between provisional and final statistics

Only final figures are published.

5 Accessibility

5.1 Forms of dissemination

The statistics are first published in *Nyt fra Danmarks Statistik* (News from Statistics Denmark) and subsequently with more details in *Generel erhvervsstatistik* (General economic statistics) appearing in the series *Statistiske Efterretninger* (Statistical News). Summaries are given in the *Statistical Yearbook* and in the *Statistical Ten-Year Review*. In 2001 the new accounts statistics became available online from Statbank Denmark (www.statistikbanken.dk), which now holds data corresponding to the tables of *Nyt fra Danmarks Statistik* and *Generel erhvervsstatistik*.

5.2 Basic material: Storage and usability

The survey data are organized in annual files comprising a complete set of accounting items for every single business enterprise and its component units (establishments). The survey files can easily yield alternative breakdowns and tabulations, in addition to those published. There are also some files ("sum files") containing aggregations for activities, kinds of ownership, size groups and regions.

5.3 Documentation

A description of concepts and methods is given each year in the article published in the series Statistical News.

5.4 Other Information

For more information (in Danish) regarding the questionnaire, accounting concepts, etc., see: Regnskabsstatistik 2004 (*General erhvervsstatistik 2006:10*) (Accounts statistics 2004, General economic statistics 2006:10) and Regionalfordelt regnskabsstatistik 2004 (*General erhvervsstatistik 2006:11*). (Accounts statistics by region 2004, General economic statistics 2006:11).

6. Supplementary documentation

For this declaration of content no supplementary documentation is available

Supplemental Accounts Statistics for Shipping

This declaration was transferred to the Internet on 25 February 2005

0 Administrative Information about the Statistical Product

0.1 Name

Supplemental Accounts Statistics for Shipping.

0.2 Subject Area

General economic statistics

0.3 Responsible Authority, Office, Person, etc.

Statistics Denmark, Business Structure Division
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Søren Ilsøe Overgaard, tel.: +45 39 17 34 17, e-mail: sov@dst.dk

0.4 Purpose and History

The purpose of the statistics is to show the level of and development in gross earnings by shipping businesses from shipping activities. The statistics have been published since 1967.

0.5 Users and Application

Users of the statistics are trade associations, banks, politicians, public authorities, international organisations, private business enterprises.

Note that some of the collected data are contained in the Balance of Payments Statistics.

0.6 Sources

The statistics are compiled from data collected via questionnaires.

The Central Business Register and other sources are used in updating the sample survey of business enterprises.

0.7 Legal Authority to Collect Data

Data is collected in accordance with the Act on Statistics Denmark (Lov om Danmarks Statistik), cf. Order no. 599 of 22 June 2000, § 8 and 12.

0.8 Response burden

In 2003 the response burden was 449 hours analogous to 145000 kroner.

0.9 EU Regulation

The Rest of the world account of the national accounts, which is derived from the balance of payments, is prepared in accordance with Council Regulation (EC) No 2223/96 of 25 June 1996 on the European system of national and regional accounts in the Community (ENS 95) (OJ L 310 30.11.96, p. 1).

1 Contents

1.1 Description of Contents

The purpose of the statistics is to show the level of and development in gross earnings by shipping businesses from shipping activities. The most important variables are: entered gross freight, time charter earnings and other earnings from shipping activities, operating costs and administrative costs along with gross earnings.

1.2 Statistical Concepts

Population

The statistics cover privately owned shipping businesses with a minimum gross tonnage of 250 GT.

Definitions:

Gross tonnage is an abstract concept that expresses the volume of all covered holds in the ship.

Time charter earnings are earnings stemming from the leasing of ships.

Earnings from passenger transport include ticket earnings and the transfer of motor vehicles as well as earnings from restaurants, kiosk sales, etc.

Other earnings include earnings from insurance, salvage operations, towing, the forwarding of goods, etc., so long as the shipping firm includes such earnings in its annual accounts. Furthermore, earnings are included on a net basis (i.e. gross earnings less costs) from offshore activities related to searching activities.

Operating costs are stated exclusive of VAT, similarly to the calculated earnings. Bonuses, discounts, etc. are also deducted.

Direct costs include costs from loading/unloading and expenses in the form of harbour, customs and vessel dues. Also included are goods consumed in own restaurants and shops on board.

Salaries, etc. for staff on board comprise salaries as well as holiday allowances, subsistence allowances and bonuses.

Other staff expenses cover, among other things, statutory or other contributions and payments to social funds, pensions, the Labour Market Supplementary Pension Fund, medical and other health programmes.

Time charter salaries are expenses for the leasing of tonnage.

Other operational expenses consist of, among other things, insurance, repair and maintenance costs, certain commissions and forwarding of goods.

Administration costs consist of salaries and other staff-related expenses for the administrative staff, such as rent (paid or estimated), office expenses, marketing, salaries to corresponding ship owner, lawyers and accountants.

Gross earnings are calculated as gross earnings less operational and administration costs.

2 Time

2.1 Reference Period

Accounting year, which for most shipping firms is the calendar year.

2.2 Date of Publication

The statistics are published annually approx. 300 days after new year in *Statistical News* in the series *Samfærdsel og turisme* (from January 1999 onwards: *Transport*).

2.3 Punctuality

Publication is normally according to schedule.

2.4 Frequency

The statistics are published annually.

3 Accuracy

3.1 Overall accuracy

Figures on the statistical reliability are not estimated.

The enterprises are obliged to report data according to the Act on Statistics Denmark and the response rate is very close to 100 pct.

3.2 Sources of inaccuracy

Inaccuracies can occur if respondents fail to submit their data and if the population in our survey does not correspond to the actual population.

3.3 Measures on accuracy

Figures on statistical errors are not available.

4 Comparability

4.1 Comparability over Time

For the total level of the statistic it is possible to compare earlier years statements.

4.2 Comparability with other Statistics

Elements in the statistics will be found also in the Balance of Payments Statistics.

4.3 Coherence between provisional and final statistics

Only final figures are published.

5 Accessibility

5.1 Forms of dissemination

The statistics appear in *Nyt fra Danmarks Statistik* (News from Statistics Denmark), in *Generel erhvervsstatistik* (Business Structure) appearing in the series *Statistiske Efterretninger* (Statistical News).

Statbank Denmark (www.statistikbanken.dk): RED2

5.2 Basic material: Storage and usability

The selected data for every shipping enterprise are stored electronically and go back to 1990.

5.3 Documentation

A description of concepts and methods is given in *Statistiske Efterretninger*, *Generel Erhvervsstatistik*, 2004 nr. 21, with the title *Supplerende regnskabsstatistik for rederier 2003*.

5.4 Other Information

Other information is not available.

6. Supplementary documentation

No supplementary documentation is available

Accounting statistics for public corporations

This declaration was transferred to the Internet on 25 February 2005

0 Administrative Information about the Statistical Product

0.1 Name

The public sector finances

0.2 Subject Area

Public Finance

0.3 Responsible Authority, Office, Person, etc.

Public finance.

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0.4 Purpose and History

The purpose of the public sector finances is partly to show those activities, which are owned or controlled by the general government and partly to illustrate the public area as an economic unit called *the public sector*. Consequently, the statistics also contain figures concerning the general government, which are used in producing statistical information about all the activities that fall within the public sector.

Statistics Denmark began publishing the statistics in March 1998 when they contained figures covering a five-year period (1992-1996).

0.5 Users and Application

Ministries of economic affairs, organizations, companies and members of the public.

0.6 Sources

Accounts of central and local governments. Annual accounting reports from approximately 250 enterprises/companies and accounting reports from two industry associations (Danske Energiselskabers Forening and Danske Varmeværkeres Forening).

0.7 Legal Authority to Collect Data

Subsection 1 of section 8 of the Act on Statistics Denmark.

0.8 Response burden

Large accounting questionnaire: 180 minutes a year.

Small accounting questionnaire: 90 minutes a year.

0.9 EU Regulation

EU: Rf2223/1996

EU: Rf58/1997

1 Contents

1.1 Description of Contents

The statistics illustrate the institutional distribution of activities carried out by the public corporations, giving total figures as well as figures divided into industrial groups. Furthermore, the statistics contain figures for the public sector and all public corporations and quasi-corporations. Specified figures for production, value added, gross operating surplus and gross domestic product at factor cost are included in the statistics.

1.2 Statistical Concepts

Units and the population: All public corporations and quasi-corporations.

Variables:

Definition of the gross fixed capital formation:

Acquisition of new fixed assets

+ acquisition of existing buildings, net

= gross fixed capital formation

Definition of the gross factor income:

Production

- intermediate consumption

= gross value added

Gross value added

+ taxes on production, net

= gross factor income

Definition of the net concept:

Gross

- consumption of fixed capital

= net

Danish Industrial Classifications:

Industries are classified according to the Danish Industrial Classification 2003 and are given a six-digit code (DB03-code). Some of the DB03 groups are combined. This is carried out for reasons of confidentiality because some DB03 groups contain very few public corporations:

- Agriculture, fishing and quarrying together with manufacturing: 01.11.10-14.50.00, 15.11.10-37.20.00.
- Electricity, gas and water supply: 40.11.00-41.00.00.
- Construction together with wholesale and retail trade; hotels, restaurants: 45.11.00-45.50.00, 50.10.10-55.52.00.
- Transport, storage and communication: 60.10.00-64.20.20.
- Financial intermediation, business activities together with public and personal services: 65.11.00-95.00.00, 99.00.00.

2 Time

2.1 Reference Period

The figures relate to the financial year. If the financial year is different from the calendar year; the calendar year with the longest accounting period is selected as the financial year.

2.2 Date of Publication

The statistics are published yearly at the end of the year, following the accounting period.

2.3 Punctuality

The statistics are usually published without delay in relation to the scheduled date.

2.4 Frequency

Yearly publication.

3 Accuracy

3.1 Overall accuracy

The overall accuracy is considered high.

3.2 Sources of inaccuracy

Full coverage of all industries is obtained by conducting a yearly check of the population in relation to a variety of sources. Accounting information is obtained from central and local government accounts and furthermore from questionnaires. Some accounting information is adjusted to the terminology used in the national accounts system and therefore deviates from normal accounting conventions. Furthermore, public corporations may use different methods of accounting. Accounting data entered wrongly are also a source of error, which is minimized by comparison with information from the previous year.

3.3 Measures on accuracy

The statistical uncertainty is not calculated.

4 Comparability

4.1 Comparability over Time

As compilation of the statistics has started recently, there have been no changes in terminology or methods and the statistics are therefore comparable over time.

4.2 Comparability with other Statistics

The statistics are comparable with statistics for the general government.

4.3 Coherence between provisional and final statistics

The figures for the latest two years are provisional, but the difference between provisional and final figures are little or nonexistent.

5 Accessibility

5.1 Forms of dissemination

The statistics are published in *Nyt fra Danmarks Statistik* (News from Statistics Denmark) and in *Offentlige finanser* (Public finance) appearing in the series *Statistiske Efterretninger* (Statistical News). Statistics also appear in the annual publication *Statistisk Tiårsoversigt* (Statistical Ten-Year Review).

5.2 Basic material: Storage and usability

All information is stored in the DIOR database.

5.3 Documentation

Further documentation is given in the series Statistical News: "Den offentlige sektors finanser" (Public sector finance).

5.4 Other Information

Other information is not available.

6. Supplementary documentation

No supplementary documentation is available

General government

This declaration was transferred to the Internet on 28 February 2005

0 Administrative Information about the Statistical Product

0.1 Name

General government finances

0.2 Subject Area

Public Finance

0.3 Responsible Authority, Office, Person, etc.

Finance and Prices

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0.4 Purpose and History

The purpose of *General government finances* is to analyse the economic activities of general government and to analyse the distribution of tasks and burden between sub-sectors of general government and finally to show the interaction between this sector and the rest of the economy. A national accounts format can be extracted from the statistics. The statistics were produced for the first time in 1975. Data are available from 1971 and onward. From 1971 to 1975 the annual data covered the period from 1 April to 30 March. From 1976 and onward the period was changed to calendar year.

0.5 Users and Application

Ministries, political parties, non-governmental organizations, local government, public and private enterprises, and members of the general public.

A growing activity of services has taken place partly in the form of individual assignments and partly in the form of subscriptions where customers receive detailed tables when new statistics are released.

0.6 Sources

Final accounts of central government, municipalities, counties and social security funds. Accounts data for public quasi institutions are still not available in May. The October version of the accounts are available for year 19xx-2, while for year 19xx-1 the data are still enumerated.

0.7 Legal Authority to Collect Data

Section 6 of the Act on Statistics Denmark.

0.8 Response burden

There is no response burden as the data are collected via accounts of central government, counties, municipalities and social security funds.

0.9 EU Regulation

EU: Regulation of the European Parliament and the Council 2223/1996

EU: Regulation of the European Parliament and the Council 3605/1993

EU: Commission Regulation 2204/1998

1 Contents

1.1 Description of Contents

The statistics monitor current and capital expenditure/revenue for the general government. Net lending / net borrowing of the general government are shown. Expenditure /revenue items are shown by type of transaction and by type of function. Taxes, subsidies and transfers to households are sub-divided by type.

1.2 Statistical Concepts

Units and populations:

The statistics cover all units belonging to the General Government thereby covering all units producing non-market services for collective consumption/redistribution of income and wealth.

Variable:

Revenue:

Compensation of employees

Includes all payments by producers of wages and salaries to their employees, in kind as well as in cash, and employees and

employers contributions to social security schemes, including pension contributions.

Gross fixed capital formation

Calculated as expenditure on construction of new buildings and civil engineering projects and purchases of transport equipment, machines, software, etc.

Consumption of fixed capital

Is also called depreciations or reinvestments and is an estimate of the normal wear and tear of fixed capital goods (including roads, bridges, etc.) in the general government sector.

Intermediate consumption

Is defined as purchases of goods and services for current consumption, including rentals for offices and buildings, etc., insurance premiums and indirect taxes and duties paid by the general government. Furthermore, some acquisitions of durable goods by the military authorities (weapon systems) will continue to be considered intermediate consumption.

Non-financial capital accumulation

Includes actual capital activities for the general government sector.

Capital accumulation is calculated as follows:

Acquisition of new fixed assets

+ Acquisition of existing buildings, net

= Acquisition of gross investments

Gross fixed capital formation

+ Changes in inventory

+ Acquisition of land and intangible assets, net

= Non-financial capital accumulation

Capital transfers

Affect either the assets of the granter or recipient. Examples are plants and investment subsidies, certain damages, loans written down and similar services, which are frequently non-recurrent.

Acquisition of existing buildings, net

is defined as purchases of real property, where the existing buildings are the most important factor in terms of value, less corresponding sales.

Acquisition of land and intangible assets, net

Comprises purchases of real property where the land is considered the most important factor, less sales.

Changes in inventory

Consist primarily of purchases of goods for intervention stocks and strategic stocks, less sales of these stocks.

Current transfers

Have an effect on current disposable income. These transfers primarily consist of transfers to households and are divided into social transfers, e.g. old-age pension and early retirement pension, civil servants' earned pension, unemployment benefit and early retirement pay, social benefit, benefits during sickness or in connection with childbirth, family/young persons' allowances etc., housing benefit and rent subsidies. Furthermore, income transfers include, for example, education benefit. To this is added transfer payments to private institutions, Faroe Islands and Greenland, the EU and rest of the world.

General government final consumption expenditure

Final consumption expenditure is obtained in the following way:

Compensation of employees + consumption of fixed capital

= Gross domestic product at factor cost

Gross domestic product at factor cost + intermediate consumption + social transfers in kind

= Output

Output sales of goods and services

= General government final consumption expenditure.

The general government final consumption expenditure or consumption comprises actual operation activities carried out for the general government sector. More than half of the general government final consumption expenditure can be broken down by specific persons. The remainder is government collective-consumption expenditure.

Interest payments

Comprise face or nominal interest, for example, distributed losses on issue prices and expenditure on rentals for land and intangible assets. Losses on issue prices are entered (written off) in line with instalments on loans.

Sales of goods and services Comprise sales of the total output of goods and services. To qualify as sales of goods and services,

there must be a remuneration in return and a certain degree of free choice on the part of the buyer in connection with the purchase.

Social transfers in kind

denote, e.g. health insurance services and aids which the general government buys on the market and allocate to households in the form of full or part payments to producers for supplying specific products to households.

Subsidies

are defined as unilateral transfers to public or private enterprises and cover a wide range of transfers. EU agricultural subsidies are an example of product subsidies. Other production subsidies are, e.g. grants for social housing, and enterprise and rehabilitation allowances, etc. Finally, subsidies to cover losses of public quasi corporations are classified as product subsidies.

Revenue items:

Other current transfers

originate from other domestic sectors, the EU and rest of the world.

Gross operating surplus and mixed income

constitute the part of gross domestic product at factor cost which goes to the general government sector. Gross operating surplus and mixed income are by definition identical to consumption of fixed capital of the general government as output of the general government is calculated as costs.

Voluntary social security contributions

entitle the depositor to public social security benefits. As contributions are voluntary no taxes or duties are imposed. The voluntary scheme covers contributions to health and unemployment insurance to the Danish Labour Market Supplementary Pension Scheme, ATP, mostly from self-employed persons, who have voluntarily joined the scheme.

Imputed contributions to social security schemes

are estimated contributions paid by civil servants, etc. These contributions correspond to the value for earned entitlement to retirement, which is added to their wages and salaries. In practice, the contribution is calculated as paid out pension for current pension schemes.

Economic rent, etc.

Comprises rentals, licence fees, etc.

Interest and dividends

Also comprise dividends and realized capital gains less any losses, in addition to the nominal rate of interest.

Taxes and duties

Are defined as compulsory transfers to the general government sector without any link between payment and acquisition of services. In the general statistics, taxes and duties are, for example, broken down by type of tax and by national accounts group. The distribution of national accounts reflects the way different types of taxes and duties affect the economy as a whole. Taxes and duties are in national accounts divided into production and import taxes, current income and property taxes, capital taxes and compulsory social security contributions. In classifying taxes and duties according to type, only the tax base is taken into account.

Withdrawals of income from quasi enterprises

Are calculated for the public quasi-enterprises, for example The Danish State Railways. When calculating profits, depreciations are included as current expenditure. The share of the profit and loss account of Danmarks Nationalbank is also included.

Statistical measurements:

Consolidation:

This statistical procedure makes sure that the flows between and inside the sub-sectors are balanced and excluded. Transfers (for example, block grants and reimbursements) and real flows (for example, purchases made between the institutions) are balanced and excluded. There will typically be inconsistencies in the primary statistical data. In the statistical system for public finance, it is assumed that the source of this problem is due to the circumstance that the the same transactions are entered into two different accounting periods. These are always balanced with figures from the local government.

Classification by units:

The general government sector comprises authorities and institutions, which are primarily engaged in producing non-market (public) services for collective consumption and/or redistributing revenue and wealth. Public services or non-market services are services, which are either actively controlled by public authorities or are made available to the general public, free of charge. In other words, the authorities or institutions producing non-market services must have other sources of revenue than revenue from market sales, i.e. that the revenue in the form of general government transfers, etc. must account for more than 50 pct. of total revenue.

The majority of authorities and institutions, which produce public services are formally public. That is, they are integrated (incorporated) into the accounts of central, regional and local government. They are called integrated public institutions.

Some public institutions are not integrated, but keep their own accounts, for example, the national church and the social security funds. These institutions are called non-integrated public institution.

Some institutions producing public services are formally private and they keep their own accounts. The reason why these institutions are incorporated into the general government sector is that they are primarily financed and controlled by the public authorities. Examples of this are private schools, private hospitals, etc., they are formally private institutions but in reality public institutions. In the national accounts these institutions are called public quasi institutions.

Classification by transactions:

Expenditure and revenue by type of transaction

The purpose of expenditure and revenue by type of transactions is to classify the transactions in the general government sector according to the influence on the economy.

The economies are influenced respectively by actual transactions and by income and redistributed transactions. Actual transactions aim at public production, while income and redistributed transactions are carried out to finance actual transactions or to redistribute incomes or wealth.

Expenditure by function

Expenditure by function illustrates the purpose of public activities, i.e. how general government expenditure is used..

Principal public services

This main group consists of activities, which are considered public, i.e. they cannot be performed by private individuals or enterprises. They comprise, for example, legislative assemblies, principal executive bodies, principal monetary and fiscal policy activities and organs, general public-sector personnel policy, centralized sales and purchasing activities, international relations and police and defence activities.

Social and health services

This main group consists of different services oriented to the individual that are offered to households and private individuals. Services comprise education, national health services, social security, different welfare services, housing, cultural, recreational and religious services.

Economic services

This main group covers public activities connected to public-sector control and regulation of industries. The main group comprises activities which promote economic development, affect regional balances, create a better business environment and improve job prospects.

Expenditure by unclassified functions

This group contains especially interest payments and other costs related to general government debt. Interest payments on debt reflect that some former defrayed costs are financed by loans and not by current taxes. These costs are not related to the current activities, and consequently they cannot therefore unambiguously be classified to a special function.

Furthermore, the classification of subsidies, taxes and duties and transfers are published.

2 Time

2.1 Reference Period

The statistics contain provisional accounts data for the previous financial year and already published data for the previous financial years, which have been subjected to additional processing. The statistics thus contain both provisional and final data.

2.2 Date of Publication

The statistics are published biannually, at the beginning of June and at the beginning of November one year after the end of the financial year in question.

2.3 Punctuality

The statistics are usually published without delay in relation to the scheduled date.

2.4 Frequency

Yearly publication.

3 Accuracy

3.1 Overall accuracy

The statistical accuracy is generally very high.

3.2 Sources of inaccuracy

Misclassification due to insufficient information about the contents of a given account.

In provisional accounts, the government's value added tax expenses are divided at the level of accounting items.

In both the May version and the October version provisional tax-estimates are used.

Subsidy accounts can be classified with some inaccuracy because it is not always possible to define the recipient of the subsidy.

Reserves and budgets adjustments:

This extra paragraph covers both earmarked and widely defined reserves. The widely defined reserves are often considerable amounts and are difficult to define. Whenever possible, Statistics Denmark collects supplementary information on these reserves.

An estimation of tax revenue charged by General Government is used

3.3 Measures on accuracy

The statistical uncertainty is not calculated.

4 Comparability

4.1 Comparability over Time

Data are comparable according to ESA95 from 1988 and onward.

4.2 Comparability with other Statistics

There is complete comparability with other statistics in the national accounts if they comply with international standards, i.e. ESA95 and SNA93.

4.3 Coherence between provisional and final statistics

The statistics for the general government are made in a number of preliminary versions. Approximately three years after the end of a fiscal year the statistics are declared final.

The statistics for the general government are made in the following versions before declared final:

The first presentation of accounts for a fiscal year is the so-called February-version, which is published at the beginning of March t+1. The sources are the preliminary public accounts (up to and including account period 12), budgets of Local Government adjusted by means of summarily account information's and preliminary accounts and budgets of social security funds.

The May-version is published at the beginning of June t+1. In this version the sources are much better. The public accounts from the general accounting office are now final. The Local Government accounts and that part of the accounts of social security funds that includes ATP (the Danish Labour Market Supplementary Pension Scheme) and LG (the Employees' Guarantee Fund) are now available. The taxes are no longer based on estimates, but based on primary data.

In the beginning of November t+1 the October-version is published. The characteristic of the October-version is that the existing data material is prepared thoroughly to expose possible insufficiencies and wrong interpretations in the adaptation of the national accounts. Furthermore are the accounts for social security funds (the unemployment insurance funds) now available. For the public quasi corporations there is now access to real accounts. The sources on the tax area are improved especially for income taxes, excise duties and VAT.

In the beginning of November t+2 the October-version is almost at its final form. In the beginning of November t+3 the last chances are added and the version can now be declared as final.

5 Accessibility

5.1 Forms of dissemination

The statistics are published in *Nyt fra Danmarks Statistik* (News from Statistics Denmark) and in *Offentlige finanser* (Public finance) appearing in the series *Statistiske Efterretninger* (Statistical News).
Yearly publications: *Statistical Yearbook* and *Statistical Ten-Year Review*.

5.2 Basic material: Storage and usability

Data is stored in an internal data base, the DIOR database for public finance.

5.3 Documentation

Further documentation can be found in the series *Statistical News* and in SU46 for documentation of the main revision.

5.4 Other Information

Other information is not available.

6. Supplementary documentation

No supplementary documentation is available

11.1 Statistical surveys and other data sources used for the income approach

The main source used for compiling GDP from the income approach is the Working Time Accounts.

Annual Working Time Account

This declaration was transferred to the Internet on 22 August 2006

0 Administrative Information about the Statistical Product

0.1 Name

The Annual Working Time Account

0.2 Subject Area

Labour market

0.3 Responsible Authority, Office, Person, etc.

Labour Market

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0.4 Purpose and History

The purpose of establishing the Working Time Account (WTA) is to compile time series on hours worked. Furthermore, it is also intended to compile data on earnings and employment for the national accounts statistics, adopting the definitions of work, earnings and employment as applied in the national accounts. At the moment, the statistics include data on sex, industry, public/private and socio-economic status (self-employed, assisting spouse or employee).

The system for the Working Time Account is the result of a 3-year project established in Statistics Denmark in 1995 with grants by The European Social Fund. The purpose of the project was to improve the current statistical description of the Danish labour market. The background to the WTA is that there has been a considerable expansion in the number of statistics covering the labour market and the fact that the figures from different statistics are not immediately comparable. The project work has been centred on developing statistical systems integrating already existing labour market statistics. In December 1998 the project ended with the publication of a report: "Integrated Labour Market Statistics - the Labour Market Account and the Working Time Account 1995-97" ("Integreret arbejdsmarkedsstatistik - Arbejdsmarkedsregnskab og Arbejdstidsregnskab 1995-97") in which 2 new statistical systems were presented. In 1999, the WTA were presented by Statistics Denmark with the inclusion of annual as well as quarterly statistics.

Since the summer of 2002, the entire system of the Working Time Accounts has been subject two major revisions. (For a detailed description of revisions see annex 1 www.dst.dk/extranet/atr/atr_bilag_en.pdf).

The generally revised figures were published on 28 February 2006 in *Statistical News: Labour Market 2006:6*.

Figures for 1995-2005* was published 22 August 2006 in *Statistical News: Labour Market 2006:23*.

0.5 Users and Application

Among users are politicians, officials, researchers and others interested in the development of the Danish labour market. The areas of application are mainly the national accounts, economic models, economic government departments and labour market organizations.

0.6 Sources

In deciding which data sources to apply in compiling the Working Time Accounts (WTA), attention is centred on the major advantages of the individual statistics. For example, register-based data are used to ensure complete coverage in the calculation of employment and the number of jobs. Information from the wage and salary system of the business enterprises is used to obtain more specific data on the distribution of hours between the individual jobs, and personal interviews are used to

obtain hourly data for those groups not covered by the data reported by the business enterprises to the Statistics on Earnings.

The 3 main sources used in the annual WTA are:

- 1) The Yearly Statistics on Earnings (Earnings statistics for the private sector, www.declarations/861, and Earnings statistics for central and local government employees, www.declarations/862).
- 2) The Register of Employment Statistics. This register forms the basis for the Register-Based Labour Force Statistics (www.declarations/848) and the Statistics on Employment in Businesses (www.declarations/1029).
- 3) The quarterly Working Time Account (www.dst.dk/declarations/70784).

The WTA use the Register of Employment Statistics for obtaining data on the total number of active jobs over the year, on the number of persons employed at end-November, and on the number of primary and secondary jobs end-November. The Register of Employment Statistics contains information on A-income for all employees, and thus constitutes the main source for calculating compensation of employees in the WTA. In the Register of Employment Statistics a comprehensive integration of data on individuals from other statistical registers has been conducted. The Register of Employment Statistics also supplies the following data which are used in the WTA: persons in employment who are on labour market leave or maternity leave, reimbursements of sickness and maternity benefits, the statistics on the Danish Labour market Supplementary Pension Scheme (ATP) and pensions that are continuously paid out.

The WTA use the Statistics on Earnings in calculating hourly data for each individual job per year. In this context, hours of work performed are of great importance, as these indicate the time worked by an employee in the process of production. On the basis of the Statistics on Earnings, figures on the average annual hours of work performed per job are calculated. In this connection, the number of jobs in the statistical data on earnings is aggregated in the WTA, so that the definition of jobs is similar to that used in the Register of Employment Statistics. From 2000, the hourly data in the Statistics on Earnings are integrated with the data on level of jobs in the Register of Employment Statistics.

The quarterly system will be currently used for calculating annual values.

Average employment (and average number of jobs) over the year is estimated as an average figure of average employment during the 4 quarters of the year (respectively average number of jobs of 4 quarters). It is thus the quarterly system, which forms the basis for calculation of average employment and average number of jobs in the annual WTA. The basis for the calculation of average employment and average number of jobs in the WTA is information on the number of persons employed in the Register-based Labour Force Statistics (RAS) and number of primary and secondary jobs in the Statistics on Employment in Businesses (EBS) at the end of November. The development over the year is estimated quarterly by combining structural statistics at the end of November for employees and monthly data reports of A-income (MIA) for employees. For self-employed persons and assisting spouses, the development in jobs is exclusively estimated as an even development from one structural statistic to the next (persons employed in the RAS and number of jobs in the Statistics on Employment in Businesses). However, rolling annual statistics from the Labour Force Survey are applied for projection during the period after the latest structural statistics (i.e. as from the 4th quarter of 2004).

For a detailed description of the methodology and MIA see the declaration of contents for the Quarterly Work Time Account annex 2 and 4 (Calculation of average employment and average number of jobs in the WTA).

The Working Time Accounts are exclusively based on existing data sources, which are subsequently converted to the concepts used in the WTA. The WTA is flexible in its choice of primary sources, which can be replaced by other sources, if these have proved to be more accurate. The choice of primary source decides the amount of data editing necessary. When it comes to integrating all the sources, however, all the concepts are consistent in conforming to international standards and every variable fulfils the requirement of the system for the WTA.

0.7 Legal Authority to Collect Data

Not relevant for the working time account.

0.8 Response burden

No response burden. New systems for reporting data have not been established. All data requirements are fulfilled by existing statistics.

0.9 EU Regulation

No EU Regulation.

1 Contents

1.1 Description of Contents

Consistent time series on employment, jobs, hours worked and compensation of employees. The data basis is made up of a number of primary statistical data, which are adapted and adjusted to achieve agreement between the concepts and definitions used.

1.2 Statistical Concepts

Concerning self-employed, assisting spouses and employees respectively, there is an accounting, definitional relations between hours worked, jobs, compensation of employees and number of employed:

The average number of employed consist of the average number of persons above the age of 14 who every day during the year have been paid either as self- employed, assisting spouse or as employee. Persons who are temporarily absent due to leave, but who are connected to a workplace in the form of having a job to return to, are counted as being employed.

1. Employment = number of primary jobs + persons on leave + persons on maternity

The average *numbers of jobs* are calculated as the sum of primary and secondary jobs. Similarly as to employment the average number of jobs is calculated for every day of the year. Employees who are temporarily absent from the labour market are not included in the estimation of jobs. There is the following relationship between the number of jobs and the number of employees:

2. Number of jobs = number of primary jobs + number of secondary jobs

The number of *hours of worked* is defined as hours paid by employers, including paid overtime and excluding paid hours of absence. Paid meal breaks are regarded as hours of availability and are included in hours worked. Paid hours of overtime are defined as the number of paid hours that are worked in excess of normal paid hours (i.e. contractual hours) and include extra hours of work for part-time employed without additional overtime pay. It is not possible to obtain detailed data on unpaid overtime hours and undeclared work. Unpaid overtime hours and undeclared work are therefore excluded from the calculation of hours of work performed in the WTA. Unpaid hours have explicitly been excluded, when quarterly statistics from the Labour Force Survey are used in estimating the provisional data on hours for the period, following the most recent structural statistics.

Hours worked include hours paid by employers, which have been carries out by persons aged over 14, including the hours in jobs that are not part of either the persons main employment or the persons largest secondary job.

3. Actual hours worked = average actual hours worked per job × number of jobs

The number of jobs refers to the total number of active jobs over a year (This concept differs from the published annual average number of jobs in the WTA).

Compensation of employees is calculated in accordance with the definitions in the National Accounts (SNA). Compensation of employees includes total wages and salaries in cash or in kind which the employer pays to an employee for work performed in an accounting period. Compensation of employees also includes employers' actual or calculated social contributions including contribution to pensions.

The compensation of the self-employed and assisting spouses is not included in the WTA. Furthermore, the hourly concept for the self-employed and assisting spouses differs from the hourly concept used for employees, as only hours in the primary job and most important secondary job are included for the self-employed and assisting spouses, and it is also impossible to distinguish between paid, unpaid and undeclared hours of work for these groups. The other variables are calculated in full accordance with the relational accounting equations that have been set up for employees.

An essential feature of these simple relational equations is that they can be used to link the various sources for different variables in the statistics. In this way, hours of worked performed are, e.g. extracted from the Statistics of Earnings, whereas the number of jobs are extracted from the Statistics of Employment in Businesses. These identities open up to, in addition to quality checks by comparing primary s sources, the fact that the relational accounting equations lead to new variables supplementing the present statistical resources.

2 Time

2.1 Reference Period

Numbers of employed and number of jobs are annual or quarterly averages.

Number of hours worked and compensation of employees are added up using the year or the quarter as the reference period.

2.2 Date of Publication

The Working Time Accounts are published once a year with annual figures and four times a year with quarterly figures.

The first release of annual data covering the period 1995-98* was on 30 November 1999.

Next publication is planned to June 2007.

The annual Working Time Account publishes provisional figures about 7 months after the reference year and final figures about 19 months after the reference year.

2.3 Punctuality

The Working Time Accounts are usually published without delay in relation to the scheduled date.

However, the work carried out with respect to the general revision of the WTA has implied that figures covering the period 1995-2001 and 1995-2003 have not been published. Instead revised figures were published on 28 February 2006 in the Statistics News, Labour Market 2006:6: Working Time Accounts 1995-2004* providing figures on the entire data series as from 1995.

2.4 Frequency

Quarterly and yearly publications.

3 Accuracy

3.1 Overall accuracy

There are no figures on the size of revisions, etc. which have been undertaken.

3.2 Sources of inaccuracy

The margins of statistical uncertainty associated with the working time statistics are related to the statistical uncertainty of the individual primary statistical sources that are used. The conceptual consistency and the uniform adaptation of sources over time contribute to a reduction of the margins of statistical uncertainty in the Working Time Account. Especially, the juxtaposition of information from the primary sources in a joint system will reveal, if any, errors, and subsequently errors can be taken into account in the WTA. These errors and inconsistencies are reported back to the primary sources. The work on integrating statistical systems will thus be instrumental in enhancing the general data quality of the primary statistical data.

For a description of the statistical uncertainties of the primary sources see the respective declarations of contents:

- ∫ Indicators for aggregate payroll costs, based on labour market contributions for employees, (www.dst.dk/declarations/847).
- ∫ Register-based Labour Force Statistics (www.declarations/848)
- ∫ Statistics on Employment in Businesses (www.declarations/1029)
- ∫ The Labour Force Surveys (LFS) (www.dst.dk/declarations/857)
- ∫ Monthly data reports of A-income (MIA) (annex 2)
- ∫ ATP-employment Statistics (based on the Danish Labour Market Supplementary Pension Scheme (www.dst.dk/declarations/845))
- ∫ Annual Working Time Account (WTA, www.dst.dk/declarations/46613)
- ∫ Earnings Statistics for the private sector (www.dst.dk/declarations/861)
- ∫ Earnings Statistics on central and local government employees (www.dst.dk/declarations/862)

There is a statistical uncertainty associated with MIA representing the seasonal pattern of employment and not only the seasonal pattern of jobs. MIA represents the number of gross jobs, consequently, if the seasonal pattern in the primary employment differs from the seasonal pattern of the secondary employment the seasonal pattern of employment will be associated with some uncertainty.

Furthermore, there may be differences in the seasonal patterns for average employment and average number of jobs compared to the seasonal patterns found in the primary data sources, if there are major differences in the development in the short-term statistics (MIA) over the year and the levels that apply in the 4th quarter of the year from the Register-based Labour Force Statistics and the Statistics on Employment in Businesses. There is also a statistical uncertainty associated with the fact that the structural statistics from the Register-based Labour Force Statistics and the Statistics on Employment in Businesses, which are status observations at the end of November of the year, represent the 4th quarter of the year.

3.3 Measures on accuracy

There are no calculations of the measures of accuracy.

4 Comparability

4.1 Comparability over Time

The compilation of Working Time Accounts is based on the idea that the figures are comparable over time to the highest possible degree. The sources will continuously be improved and replaced by other sources if these have proved to be more accurate. New sources will always be adapted to the concepts of the Working Time Accounts System. This implies that adjustments of existing sources cannot immediately be seen as changes of variables and concepts in the Working Time Accounts Statistics, although adjustments of the level of the specific variable may be made according to the new and improved information.

4.2 Comparability with other Statistics

The lack of data comparability between sources is attributable to differences in:

- Compilation methods
- Populations
- Definitions
- Margins of statistical errors
- Time of publication.

A fundamental principle of the Working Time Accounts is to document the coherence between statistics applied in the Working Time Accounts and to document coherence between existing statistics and the Working Time Accounts.

At the international level there is also a high degree of comparability as the Danish Working Time Accounts are worked out according to international guidelines, cf. EUROSTAT 1996: European System of Accounts (ESA 1995) and International Labour Organisation 1988: Current International Recommendations on Labour Statistics.

(Transitional tables between the WTA and the *Danish National Accounts* (Employment, hours worked and compensation of employees), *Register-based Labour Force Statistics* (employment) and the *Statistics on Employment in Businesses* (jobs and compensation of employees) can be seen in annex 6 www.dst.dk/extranet/atr/atr_bilag_en.pdf).

4.3 Coherence between provisional and final statistics

A provisional year is calculated on the basis of quarterly statistics.

The Working Time Accounts are undergoing a continuous development. In keeping with the current improvements of the sources and methods used in the Working Time Accounts, the annual figures will be revised.

5 Accessibility

5.1 Forms of dissemination

The statistics are published in *News from Statistics Denmark* (*Nyt fra Danmarks Statistik*), in the series *Statistical News* ("*Statistiske Efterretninger*") and in *Statbank Denmark* ("*Danmarks Statistikbank*").

5.2 Basic material: Storage and usability

The basic material consists only of existing statistics. The basic material for the compilation of quarterly working time accounts is widely stored, but detailed non-published information is not made available.

5.3 Documentation

A report: "Integrated labour market statistics - the Labour Market Accounts and the Working Time Accounts 1995-97" ("*Integreret arbejdsmarkedsstatistik - Arbejdsmarkedsregnskab og Arbejdstidsregnskab 1995-97*") was published in December 1998. In this report, the Working Time Accounts were presented, including a far more detailed description of the applied primary sources and conceptual differences between these (The report is available at www.dst.dk/boghandel)

The Working Time Accounts will currently be published in the series *Labour Market* (*Statistical News*), together with the release of the main results in *News from Statistics Denmark*.

See annexes to the declaration of contents at www.dst.dk/extranet/atr/atr_bilag_en.pdf

5.4 Other Information

No other information is available.

6. Supplerende dokumentation

Til denne varedokumentation findes ingen supplerende dokumentation

11.2 Statistical surveys and other data sources used for the expenditure approach

The main sources used for compiling GDP from the expenditure approach are:

- Retail Trade Index
- Household Budget Survey
- Census of Buildings
- Construction
- Construction cost index for residential buildings
- Construction cost index for civil engineering projects
- ICT expenditure
- EU-trade (intrastat)
- Trade with non-EU-countries

Retail Trade Index

This declaration was transferred to the Internet on 3 October 2006

0 Administrative Information about the Statistical Product

0.1 Name

Retail Trade Index

0.2 Subject Area

Service sector

0.3 Responsible Authority, Office, Person, etc.

Service Sector
Head of Section
Anja Buchwaldt
Direct +45 39 17 31 15
email: abu@dst.dk

0.4 Purpose and History

The purpose of the Retail Trade Index is to analyse and explain the development in turnover within the different sectors of retail trade, which is the important part of private consumption in Denmark. For evaluations and analysis of this economic trend development and the sectors of retail trade the survey is used.

The Retail Trade Index has been calculated for the three main commodity groups within the retail trade since 1939. In 1945 the publication was extended to 40 sectors, and today the publication covers 49 sectors of retail trade. From 1971 seasonally adjusted quantity index has been calculated. The methods of calculation have been revised several times, last time 1 January 2006. The sample has also been renewed several times. On the 1 January 2002 the criteria for drawing the sample were changed and since the sample is annually renewed by approximately 1/3.

0.5 Users and Application

Everybody who monitors the current business trends shares a great interest for the published statistics of retail trade. The statistics is in demand from trade associations, bank and finance sector, politicians, public and private institutions, researchers, enterprises, news media and Eurostat. It is also of great interest to many enterprises within the retail trade, as publications allow them to compare their own sales to those of their sector of trade. Furthermore, the statistics provide the significant input to the national accounts statistics, published quarterly by Statistics Denmark.

0.6 Sources

The Retail Trade Index is based on telephoned or written response by the enterprises in the sample.

0.7 Legal Authority to Collect Data

The Retail Trade Index has began as a voluntary survey. Legal authority to collect the data is currently given by the Act on Statistics Denmark (Lov om Danmarks Statistik), Section 8.

0.8 Response burden

The lifetime burden on the average respondent was for the year 2003 equivalent to 2.9 years of work.

0.9 EU Regulation

The Retail Trade Index is subject to European Council regulation (EC) no. 1165/98 of 19 May 1998, concerning short-term statistics.

1 Contents

1.1 Description of Contents

The Retail Trade statistics is published both as a turnover index and as a deflated turnover index. The turnover index shows the development in the turnover in current prices. Thus it includes both the development in volume and in price. The turnover index is published for all 49 sectors of the retail trade and for the 3 main commodity groups: "Food and Other Basic Commodities", "Clothing etc." and "Other Consumption Goods". The deflated turnover index, corrected for the development in prices, is a quantity index that shows the development in the volume of sales. The turnover index is deflated with the weighted consumer price index. For more detailed information one can contact the person responsible for "Prices and Consumption" in the Department of Economic Statistics. Deflated turnover indices are not published for all sectors of the retail trade, but only for the whole retail trade and the three main commodity groups. The indices for the three main groups and the whole retail trade are also seasonally adjusted. This adjustment takes into account certain public holidays (e.g. Easter) as well as the number of trading days in each month. So far it is not possible to correct for all types of trading day effects.

1.2 Statistical Concepts

Units and population. The enterprises in the Retail Trade Index are all legal units. In the Central Business Register of Statistics Denmark (CBR) the legal units are known by their CVR-number. Those units, who have their main or secondary activity within the sectors of retail trade, constitute the population. The total number of enterprises in the sectors of the retail trade is estimated to be approximately 31,000. Those 31,000 enterprises are delimited to approximately 9,000 enterprises with a turnover in excess of DKK 2,5 mil. From this population a sample is made, which is used as a frame for the calculations of the Retail Trade Index.

Variables. In the survey the enterprises are asked about their sales, VAT included, to private households. Sale to private households is defined as retail trade.

Statistical aims. In the national publications the index for each sector of retail trade is stated as turnover index. For the three main commodity groups, a deflated turnover index and seasonally adjusted index is also stated.

Classifications. In the national publication the following classifications of sectors of trade are used:

- Grocer's shops (52.11.10)
- All-nights shops (52.11.20)
- Supermarkets (52.11.30)
- Discount stores (52.11.40)
- Retail sale of fruit and vegetables (52.21.00)
- Retail sale of meat and meat products (52.22.00)
- Retail sale of fish, game, crustaceans and molluscs (52.23.00)
- Bakers' shops and retail sale of bread, cakes and flour confectionery (15.81.20 and 52.24.10)
- Retail sale of chocolate and sugar confectionery (52.24.20)
- Retail sale of alcoholic and other beverages (52.25.00)
- Retail sale of tobacco products (52.26.00)
- Retail sale of cheese (52.27.10)
- Retail sale of other specialised stores with food (52.27.30 and 52.27.90)
- Variety and department stores (52.12.10 and 52.12.20)
- Dispensing chemists (52.31.00)
- Perfumery shops (52.33.10)
- Chemists (not licensed to dispense medicine) (52.33.20)
- Retail sale of textiles (52.41.00)
- Retail sale of ladies clothing (52.42.10)
- Retail sale of men's clothing (52.42.20)
- Retail sale of men's and ladies clothing (52.42.30)
- Retail sale of baby articles and children's clothing (52.42.40)
- Retail sale of footwear (52.43.10)
- Retail sale of leather goods (52.43.20)
- Retail sale of furniture (52.44.10)
- Retail sale of furnishing fabrics (52.44.30)
- Retail sale of kitchen utensils, glass and china (52.44.40)
- Retail sale of electric household appliances (52.45.10)

- Retail sale of radio- and television goods (52.45.20)
- Retail sale of records, CDs, cassettes, etc. (52.45.30)
- Retail sale of musical instruments (52.45.40)
- Retail sale of hardware (52.46.10)
- Retail sale of building materials (52.46.20)
- Retail sale of paints and wallpaper (52.46.30)
- Retail sale of books, newspapers and stationery (52.47.00)
- Retail sale of carpets (52.48.01)
- Retail sale of watches and clocks (52.48.05)
- Retail sale of watches, clocks and jewellery (52.48.10)
- Retail sale of jewellery (52.48.15)
- Retail sale of glasses (52.48.20)
- Retail sale of photographic equipment (52.48.25)
- Gifts shops (52.48.30)
- Retail sale of sports goods (52.48.45)
- Retail sale of toys and games (52.48.50)
- Retail sale of bicycles and mopeds (52.48.60)
- Retail sale of computers, standard software and office machinery (52.48.66 and 52.48.67)
- Retail sale of telecommunications equipment (52.48.70)
- Florist's shops and retail sale of plants and seeds (52.48.75 and 52.48.80)
- Retail sale via mail order houses (52.61.00)

The groupings are constituted by use of DB03; the codes are showed in parentheses. A complete description of the sectors exists in "Danish Industrial Classification of All Economic Activities 2003" (DB03), Statistics Denmark 2003. The shift from DB93 to DB03 from the 1 of January 2003 has caused minor changes to a few series.

In the national publication the following grouping of main sector indices are furthermore used:

Food and Other Basic Commodities cover the total turnover at grocers and shops with specialised sales within food and other basic commodities, inclusive department of food in supermarkets, discount stores and department stores.

Clothing etc. consists of the turnover in stores with specialised sales within clothing, footwear and textiles inclusive supermarkets, discount stores and department stores sales of these goods.

Other Consumption Goods cover the turnover mainly for stores with sales of equipment for home and leisure together with the supermarkets, discount stores and department stores sales of these goods.

In Eurostat publications another grouping of the sectors are used and the following sectors are included:

52.32.00, 52.44.50, 52.48.35, 52.48.40, 52.48.55, 52.48.85, 52.48.90, 52.48.99, 52.50.10, 52.50.20, 52.50.90, 52.62.10, 52.62.90, 52.63.00

2 Time

2.1 Reference Period

The questionnaires concerning the sales for the previous month are posted the last day of the present month. In the publication, indices are published for the month following the previous publication month.

2.2 Date of Publication

The statistics are usually published the first working day every month for the three main sector indices in the article *News from Statistics Denmark*. Index for each level of sector of retail trade is published approximately 53 days after the reference period in Statbank Denmark and 53 days after the end of each quarter in *Service Sector Statistics (Statistical News)*.

2.3 Punctuality

The statistics are usually published without a delay in relation to the scheduled date.

2.4 Frequency

Articles *News from Statistics Denmark* are published every month, i.e. the article is published 12 times a year. *Statistical News* articles are published every third month, i.e. 4 times a year.

3 Accuracy

3.1 Overall accuracy

The delimitation of the population is based on the Central Business Register of Statistics Denmark and DB03. The starting point is enterprises with their main activities within retail trade. In addition, the enterprises with their main activity outside retail trade but with their second line of business within retail trade are included. For the latter a recalculation is carried out, so that only the part of the turnover connected to the retail trade is included. Furthermore, bakers are also included in the retail trade statistics,

even though their sector in the trade classification belongs to the production industry.

The total turnover of the sectors included in the Retail Trade Index accounts for approximately 96 per cent of the total turnover in the whole retail trade sector. Some retail trade sectors are not included in the statistics, partly due to insignificant sales and partly due to some specific conditions in certain sectors.

Since the survey is compulsory and the reminding procedure is intensive, the response rate is approximately 99 per cent, measured on turnover in final figures.

3.2 Sources of inaccuracy

Coverage

The total number of enterprises in the population is estimated to be approximately 9000. From this population a sample is selected that is used as a basis for calculating the indices. This sample comprises units in the population, which generate annual turnovers for at least DKK 2.5 million, VAT included. The sample covers approximately 36 per cent of the enterprises and approximately 87 per cent of the total turnover from all the enterprises with turnover of at least DKK 2.5 million in the sectors of retail trade.

Sample/size class

In the sample, all enterprises with annual sales in excess of DKK 20 million, VAT included, are included. The remaining enterprises are chosen optimally. The population is divided into 4 size classes. The size classes are: DKK 2.5-5 million, 5-10 million, 10-20 million and beyond 20 million. Among the enterprises with less than DKK 20 million in annual turnover, the size of the sample is determined by the turnover index. The units with retail trade as their secondary line of business are chosen based on their share of the total turnover within the sector of retail trade. The limit of DKK 2.5 million in annual turnover for participating in the sample has been chosen to curtail the burden of the respondent for small enterprises.

The total selected sample consisted per 1 January 2006 of 3.300 enterprises. Each year the sample is renewed by approximately 1/3 of the enterprises with an annual turnover between DKK 2.5-20 million. Hence, it is assured that the size of the sample is kept at the same level and the sample gives an accurate picture of the retail trade sector. This method implies that some enterprises can be exempted from the sample for some period.

Collecting/measuring

The reported figures of the turnover are either typed in by telephone or obtained through submission of completed questionnaires by the enterprises. The questionnaires are posted at the end of the period for which data are submitted. If the questionnaires have not been returned within a few days after the deadline, a reminder is sent, together with a new deadline. If this deadline is exceeded as well, the enterprise is reminded by telephone. Completion of the questionnaires is mandatory. However, some enterprises do not fulfil their duty. In those cases Statistics Denmark sends a registered letter, stressing out that their turnover must be reported within a week. Otherwise, Statistics Denmark will notify the police.

In the questionnaire, each enterprise is asked about their turnover, VAT included, to private households. Turnover to private households is defined as retail trade. This includes repairs undertaken at the premises of the enterprise; for instance, the repairs of watches are also included in the total turnover for the watch and clock stores.

Supermarkets, discount stores and department stores sell a very wide variety of goods. In order to be able to estimate and publish the Turnover Index, which is divided into three main commodity groups: "Food and Other Basic Commodities", "Clothing etc." and "Other Consumption Goods", the enterprises in these sectors are requested to report the turnovers for those three main commodity groups separately. If the enterprise is unable to submit accurate figures, it is requested to estimate the sales stemming from each group.

The submitted data undergo an error probability control. If the reported turnover deviates considerably from earlier records then the enterprise in question is asked to investigate the correctness of the returned turnover figures. It is assumed that not all errors in submitted forms are detected, and therefore the statistic is a subject to some uncertainty.

Maintenance of the sample

Due to the intensive reminder procedure, only a very limited number of enterprises in the sample do not return the completed questionnaires.

The sample is renewed each year by refreshing one third of the sample. Hence, it is possible to update changes in the structure and in the development in the populations turnover. Furthermore, the annual renewal keeps the size of the sample at the same level and insures that a level break will not occur in the enumerated turnover.

Calculation method

The enumeration is based on the reported turnovers and the VAT-turnovers submitted to VAT Statistics. Information about VAT-turnovers is received every 3 month from the Central Business Register of Statistics Denmark. VAT-turnovers are used both to determine the optimal sample allocation and to improve the accuracy of the estimates.

The estimated Retail Trade Index is an expression for the development in the retail trade for enterprises with an annual turnover in excess of DKK 2.5 mil. This development is also assumed to express the development in total retail trade.

The total estimated turnover is calculated as a sum of each sectors estimated turnover. The Retail Trade Index, based on the estimated turnover is calculated for every sector in retail trade, and for the total retail trade. Formulas for these calculations can be seen in Statistical News, *Service sector 2002:48*. No absolute figures for the retail trade are published.

Anyone interested in the absolute turnover figures for each sector or for the total retail trade, is referred to the statistics over business units registered for VAT settlement, published with industrial distribution.

The seasonal adjustment of the indices for the three main commodity groups, the index for the total retail trade, and indices for the sectors that are sent to EUROSTAT, is performed by the use of X-12 ARIMA, with the user surface Demetra. The seasonal adjusted series are corrected in such a way, that the annual sum of the seasonally adjusted series equals the annual sum of the original series. If detailed information on the seasonal adjustment is needed, one can contact the person responsible for this statistics or the Methodological Unit of Statistics Denmark.

The figures in the publication *News from Statistics Denmark* are based on a high percentage of reported turnovers; hence, there are only minor differences between the provisional and the final figures that are published in the *Statistical News* articles.

3.3 Measures on accuracy

The survey is based on a sample and thus some uncertainty is attached to the results. For the whole retail trade sector, however, the uncertainty is considered to be small, since the coverage is extensive. A risk of a higher uncertainty is taking place in those sectors, where the coverage is not always as extensive. The monthly estimation of development in turnover in each sector of retail trade will therefore carry some uncertainty, especially in sectors that mostly consist of enterprises with an annual turnover of less than DKK 2.5 mill. Uncertainty caused by wrongly reported figures and misunderstandings are sought minimized by different means of probability control of the submitted figures

4 Comparability

4.1 Comparability over Time

The survey has been carried out since 1939. Since then the sample selection, the calculation procedures and the basic periods have been adjusted several times.

The latest methodical changes were made the 1.1.2005, together with the latest renewal of the sample. The new industrial classification by 2003, has only caused minor changes to a few sectors. Thus by recalculating the data back to 2000, the series should not have a data break.

4.2 Comparability with other Statistics

Other business trend statistics also show the development in retail trade. Therefore the results of the survey are the object of ad-hoc confrontation with the other statistical sources. Below, a brief description of the relationship between the Retail Trade Index and a number of other statistics, which can be used to assess development in the retail trade is given.

VAT statistics

Besides being an all-inclusive statistic, the VAT statistic is different from the Retail Trade Index statistic in the sale and unit concepts that are used. In the VAT statistic, the total turnover is the total domestic turnover for the enterprises that have retail trade as their main activity. While the Retail Trade Index only covers the turnover to private individuals. In the Retail Trade Index the enterprises with the retail trade as their secondary activity are also included. The VAT statistics are based on current payments of VAT. This means that changes in population have in principle an immediate effect on the figures in the VAT statistic. The same is not the case with the Retail Trade Index.

Consumption of goods in the national accounts statistics

The Quarterly National Account Statistics state private consumption including the households consumption of certain types of products, for which development in turnover are included in the Retail Trade Index. In the National Accounts Statistics, figures are stated regarding the quarterly development in consumption by product type.

Other statistics

Apart from the above-mentioned statistics, which can be used to assess the development in the total retail trade, a number of other statistics partly cover household consumption.

For the purpose of business trend valuations, monthly statistics are made for sales of newly registered motor vehicles, based on information from the Central Register of Motor Vehicles.

Annual statistics based on samples are made for sales in a number of service trades (for example retail trade in personal computers, etc., wholesale sales of office machines, etc.)

A number of associations within the retail trade prepare statistics on developments in sales based on data from their own members.

4.3 Coherence between provisional and final statistics

The provisional figures in the publication *News from Statistics Denmark* are based on high percentage of reported turnover. Hence, there are only minor differences between the provisional and final figures, which are published in the *Statistical News* articles.

5 Accessibility

5.1 Forms of dissemination

Current publications: *News from Statistics Denmark, Service sector (Statistical News)* and *Main Indicators*.
Yearbooks: *Statistical Yearbook*.

Statistics Denmark's StatBank Denmark at www.statistikbanken.dk

5.2 Basic material: Storage and usability

Basic material is kept and stored for approximately two years (in both paper and electronic form).

5.3 Documentation

The present statistical method is more closely described in *Statistical News: Service sector 2002:48*. The changes concerning the new industrial classification are described in *Statistical News: Service sector 2003:24*.

5.4 Other Information

Other information is not available.

6. Supplemental documentation

No supplemental documentation is available

Household Budget Survey

This declaration was transferred to the Internet on 3 July 2006

0 Administrative Information about the Statistical Product

0.1 Name

Household Budget Survey

0.2 Subject Area

Incomes, consumption and prices

0.3 Responsible Authority, Office, Person, etc.

Prices and Consumption
Martin Jeppesen tel.: +45 3917 3411
e-mail: mje@dst.dk

0.4 Purpose and History

The purpose of the survey is to give information on the economic conditions of the private households - incomes, savings as well as consumption. Consequently, the survey can be characterized as a survey of living standards and of general economic conditions.

The survey has been conducted at varying intervals since the late 19th century. From 1994 the survey was subjected to substantial methodological changes, and the survey is now conducted on an annual basis in a way that makes comparisons possible.

Similar surveys are conducted in most other countries.

Other statistical products give information on topics in the household budget survey, e.g.:

- The national accounts give information on private consumption - but the figures from the household budget survey are more detailed, and they can be grouped by household types.
- The income statistics give information on household income - but the income concept in the household budget survey is broader and covers also untaxed incomes.
- The general statistics on households, housing, etc. give information on households and on housing - but the household concept in the household budget survey differs slightly, as it is based on the own definition of the household.

In general, it is recommended that the household budget survey is only used (based on a sample) in cases, where the information needed cannot be found in other (register-based) statistical products.

0.5 Users and Application

In addition to serving the general public interests the survey has broad groups of users:

- It is used internally at Statistics Denmark in compiling price indices and national accounts statistics.
- Government bodies use the survey for purposes of planning and for conducting analyses of the consequences of new legislation, etc.
- The survey is used for researches purposes within several fields.
- The survey can be used for marketing purposes, etc.
- Internationally, the survey is widely used. Especially, EUROSTAT is very active in enabling comparability of the survey results among the EU Member States.

0.6 Sources

The survey is based on a sample, and the number of participating households in the latest survey is 2,581 from among 2.554 million households in Denmark in 2003 (estimated in the Household Budget Survey).

The data is obtained from 3 different sources:

The households have participated in a comprehensive interview. Here, they have been asked about regular outlays a year back, major expenses, the stock of durables kept by the households, the use of services within the health system, education and child care, and some incomes. The interviews are conducted with different households throughout the calendar year, so some data will concern the previous year.

The household has kept a detailed diary for two weeks, implying that the households write down every single expense in this period. The diary keeping is conducted in different households throughout the calendar year, so seasonally changes are taken into account.

The diary keeping has two main purposes:

- It ensures a total coverage of e.g. new products and rarely consumed products.
- It ensures coverage of more day-to-day consumption that cannot possibly be remembered a year back.

To ease the participation in the survey, questions regarding topics for which Statistics Denmark already have usable data, are left out. This regards data about income and taxes, dwellings, education and occupation.

The purpose is to draw a sample, which gives results that are good approximations for all private households in Denmark. At the same time, it is important that the interviewers conducting the data collection are the best qualified for this job.

To reduce transport costs, the sample is drawn randomly within specific geographic areas, defined by the address of the interviewer as well as the consideration of a reasonable geographic coverage.

It is not possible to draw a sample among households in accordance with the way in which they are defined in the survey. Instead, the sample is drawn from addresses. When the interviewer visits the address, it is decided whether one or more households are living at the address, or if the address is unoccupied or occupied by a shared household, such as an old-age home, which is to be excluded. In the case of more households at the address, all households have, as far as possible, participated.

Different addresses were visited at different times of the year, so that the whole year has been covered. The participating households were visited twice:

- At the first visit the household was defined, the instructions of the diary keeping were given and the first part of the interview was completed.
- At the second visit two weeks later the second part of the interview was completed and the interviewer received the completed diary from the household.

The interview has been carried out using a laptop. Consequently, it has been possible to do a number of checks at the spot, which is important for the quality of the survey.

Statistics Denmark does not have disposable interviewers, who can visit households all over the country, so the fieldwork in 2002-2004 was carried out by interviewers from the company SFI-SURVEY. Statistics Denmark is fully responsible for the survey, including interview program and other materials used.

The objective is to collect data from approximately 1,000 households a year. A sample of this size is too small to give a reasonable foundation for a detailed statistic, so instead data from 3 years in succession are aggregated into one sample. All expenses, incomes and so forth are recalculated to the price and volume level of the middle year. In the latest survey, data is collected in 2002, 2003 and 2004, and subsequently recalculated to the 2003 level.

0.7 Legal Authority to Collect Data

Data is collected according to section 1 of the Act on Statistics Denmark.

Participation in the survey is voluntary.

0.8 Response burden

No response burden has been estimated since participation in the survey is voluntary.

0.9 EU Regulation

No direct regulation exists - but the regulation on the harmonized index on prices indirectly presupposes that a kind of household budget survey is conducted.

1 Contents

1.1 Description of Contents

The survey gives detailed information on the economic conditions of the households. The following main topics are covered in an exhaustive and comprehensive way:

- Consumption
- Incomes
- Stock of durables
- The use of health-, education- and child care services
- Pension schemes
- Direct taxes
- Taxes on imports and production
- Indirect transfers from the public - i.e. the transfers, which the household receives without paying the total costs for the services.

This information can then in a great variety of ways be combined with background information on the households, among this information is:

- Household size and composition
- Household income
- Housing conditions
- Level of education
- Geography
- Etc.

1.2 Statistical Concepts

Units and population:

The household budget survey examines the *economic conditions* of private households. Consequently, consumption is recorded in value, not in volume.

The survey examines the actual economic conditions of the households. Questions about attitude or opinion are not collected.

A private household is defined as an *economic unit*: A group of persons living together and having a high degree of common economy - that is sharing incomes and expenses. In 2003, there were 2.554 million private households in Denmark (estimated by the Household Budget Survey).

Persons living in different kinds of shared households (prisons, hospitals, some institutions etc.) are excluded, since it is typically impossible to distinguish the private economy from the shared economy. For some of the survey variables, it is important to have this exclusion in mind, e.g. for analyses of the use of hospital services (as more permanent hospitalized persons are not covered).

In principle, the latest survey covers 5.347 million persons of the total population of 5.391 million persons in 2003.

It is the *private* economy that is examined. Goods consumed in a production process (plant and machinery etc.) and other company-related expenses are not covered.

The household concept in the Household Budget Surveys differs from other concepts used by Statistics Denmark. In the register-based statistics, households are either defined as persons living at the same address, or as persons connected by different bonds (marriage, common children etc.). In the Household Budget Survey, the definition is made by the involved household itself in co-operation with the interviewer.

In most cases, there is no difference between the different definitions, but in some cases a lodger will be included in the main household in the register-based statistics, while the lodger who has a separate economy constitutes a separate household in the Household Budget Survey. In the typical statistics from the survey, no distinction is made between married and non-married couples, and no distinction is made between couples of different or same sex. Furthermore, it is not important if a person is registered at a specific address at the national registration office. It is the actual situation when the interviewer visits the household that is important.

While the data in the survey is normally per household, it will in many cases be relevant to look at the data per person or by equivalence unit.

E.g. it is not meaningful to compare an average household whose yearly income is over DKK 800,000 and whose total consumption amounts to DKK 433,000, while an average household whose yearly income is under DKK 150,000 and whose total consumption only amounts to DKK 118,000. This is due to the fact that the first household type consists of 3.3 persons, while the latter consists of 1.1. Consequently, more people share income and consumption in households with higher income.

For analytical purposes it can therefore be relevant to look at the consumption per person in this case the consumption in households with higher income will be DKK 133,000 per person, while the household with lower income uses DKK 110,000 per person for consumption.

In a welfare analysis conducted on the basis of consumption per person, it is indirectly assumed that all persons have the same needs, regardless of the household type to which they belong.

To make a better comparison between households of different size and composition, consumption etc. can alternatively be calculated by equivalence unit. The reason is that households consisting of several persons have certain large scale advantages. A household with several persons are able to share a part of the dwelling area and installations, it may make large scale shopping cheaper, every person in the household does not need a car etc. To obtain a similar welfare level, a household with 2 persons does not need to have a twice as large consumption as a household with 1 person. Furthermore, it is implied that children do not need to have the same consumption level as adults, to obtain the same welfare level.

To compare the welfare level between different household types, an equivalence scale can be used. This type of scale is designed to recalculate the welfare effect of consumption or income of different households. The main unit is the adult equivalent - that is the consumption in a household consisting of precisely 1 adult. There is no unambiguous way to define such a scale, so on the basis of international recommendations Statistics Denmark has decided to define the equivalence unit in the following way:

The first person over 14 years old counts for 1, other persons over 14 years count for 0.5 and children 14 years old or lower count for 0.3. A household consisting of 2 adults and 2 children therefore consists of 2.1 equivalence units. This scale is called the modified OECD-scale.

Re-estimated using this scale a household with an income of 800,000 consists of 2.0 equivalence units, while a household with an income of up to DKK 150,000 consists of 10 equivalence unit. The consumption per equivalence unit is therefore DKK 221,000 in the first household type and DKK 115,000 in the latter.

This way of defining the scale is subjected to discussion. It may be claimed that the scale should be graduated even more by the age of the person, that the large scale effect should be graduated and so forth.

While consumption is collected by household, other parts of the survey are collected by person. This applies to incomes, taxes, data about pension schemes and the use of public services etc.

Variables:

Wages and salaries etc. consists of wages and salaries before tax is paid, employers and employees payments to pension schemes, including ATP (Danish Labour Market Supplementary Pension Scheme), as well as salaries in non-monetary forms e.g. paid for car, dwelling etc.

Entrepreneurial income etc. consists of profit from self-employed occupations. Investment income regarding the business is included, while interest expenses are excluded. The item can sometimes contain values below zero either because the business as such has a deficit or because the interest expenses have been large. Furthermore, self-employed person consumption of own goods from production or shop (e.g. farmers or grocer) is included, as well as income from undeclared work.

Property income contains income from private investments and stocks etc. Furthermore, the imputed rent for owner-occupied dwellings and secondary residence are included. On the other hand, increase in value (either realized or not) of capital goods such as securities and real estate is not included.

Private transfer income contains received presents and winnings, payments from insurances etc. as well as payments from private pension schemes (including ATP) and received child maintenance and alimony.

Public transfer income contains payments from public pensions, unemployment benefit and other unemployment fund payments, sickness benefit, cash benefit, study benefit, housing benefit as well as child benefit.

Other incomes and balancing contains several minor types of income, as well as balancing as a result of difference in periods between different types of data. The value may sometimes be below zero.

These incomes add up to the *gross income*.

Besides these types of more current incomes, the household also may receive *capital transfers*, such as inheritance, payments from the Danish Employees Capital Fund, one-time payments from ATP etc.

The sum of the gross income and capital transfers constitutes *total income*.

From the total income *income taxes etc.* (direct taxes) are paid, which include ordinary income taxes, labour market contributions, taxes regarding inheritance, housing and presents as well as payments to unemployment insurance.

Furthermore, *private interest expenses etc.* are paid, in which especially interests regarding housing are of importance. Also other compulsory transfers are included, such as paid child maintenance, alimony, compensation etc.

The total income minus income taxes and private interest expenses constitutes *the disposable income*.

Adding the net sum from received capital pension to the disposable income equals the central concept *disposable amount*.

The disposable amount can be used to pay different fines that is a payment, which is similar to taxes.

It can also be used for presents and charity towards other households or charity organizations.

It can be used to pay for subscriptions to associations (non-profit organizations regarding households), including labour unions, sport associations etc.

The household can also use there disposable amount as *savings*, which can be divided into four types:

- *Payment for pensions schemes and ATP* (Danish Labour Market Supplementary Pension Scheme). This includes all types of pension schemes, private as well as types organized through an affiliation at the labour market.
- *Payment for private life insurances etc.*
- *Value of extension and rebuilding etc. of the dwelling or secondary residence* as well as expenses regarding building of a new dwelling considered to be investments regarding the dwelling. According to international recommendations, expenses regarding buying or selling of the dwelling are included (e.g. the real estate agents fee). However, the buying or selling price in itself is excluded.
- *Other kinds of savings*, which are calculated as a residual, and cover all other forms of positive or negative savings, including repayment on loans on owner-occupied dwellings, consumer credits, student loans, savings or loans in banks etc.

Please note that in spite of payments to pension schemes, they are included as positive savings, payments from pension schemes are regarded as income and not as negative savings. The reason is that for the individual person, there is no direct relationship between the contribution to and the payments from the pension scheme, because it depends, among other things, on the expectancy of life for a person.

The remaining part of the income is used as *consumption*.

- The major part is paid consumption of goods and services. Note that goods bought by instalment are included as the total cash price (excluding credit costs). Repayments are, on the other hand, not included as consumption but as saving. Private sale of personal property is included as negative consumption. This is especially important concerning cars, where it is common to pay a part of the new cars price by means of the sales price of the old car.
- The imputed rent for owner-occupied dwellings and secondary residence are included as consumption.
- Furthermore, also types of non-monetary incomes are included (paid for car, telephone as well as self-employed persons consumption of own goods).

As supplement to these main aggregates, also data about *indirect contributions* from the authorities, which are indirectly received by the households when using public services as child care, education and health care, which is free of charge or is subject to a price reduction, are available.

Furthermore, data about *production- and import taxes* (indirect taxes) paid by the households are available, i.e. taxes and duties imposed especially on the consumption, but also extension and rebuilding of the dwelling, such as VAT on building materials etc. and stamp duty regarding buying and selling of dwellings.

When including the indirect contributions and production- and import taxes, it is possible to monitor the economic transactions between the households and the authorities:

- To the household from the authorities: Direct transfers, i.e. public transfer incomes + indirect contributions.
- From the households to the authorities: Income taxes + production- and import taxes.

Especially the indirect contributions are difficult to interpret. It makes no sense to claim that a person being hospitalized over a longer period, and therefore having received a large indirect contribution, has a welfare gain in comparison with a healthy person. Furthermore, it is worth noticing that only some but essential types of contributions are included. A major drawback is that it has not yet been possible to include public contributions towards medicine.

The survey also contains data about the households *net wealth*. More precisely, it is the tax related net wealth at the end of the year. In 1997, wealth tax was cancelled, and as a consequence not all types of wealth are reported to the tax authorities. The amount is therefore too low for some households, but it still gives an idea of the distribution of wealth.

Statistical measurements:

The typical statistics from the survey are given as an average in DKK per household per year.

Groupings:

Consumption as well as incomes can be grouped at different levels of detail. The consumption can for instance be classified to between 11 and 1,100 groups.

2 Time

2.1 Reference Period

The data is collected over a period of 3 years, so the real reference period is this 3-year period.

To facilitate the use of the data, all information is recalculated in the best possible way so that it covers the year in the middle, implying that for the practical use, the reference period is one calendar year (for flow variables, such as consumption and income, it can be perceived as the calendar year, and for stock variables, such as household configuration and dwelling situation, it can be perceived as the end of the calendar year).

2.2 Date of Publication

The statistics are updated yearly, where approximately one third of the households are new, while two thirds was also included in the previous survey. Measured according to last years data collection, the publication time is about 1 year.

2.3 Punctuality

The statistics are usually published without delay in relation to the scheduled date.

2.4 Frequency

A yearly updated version is published.

3 Accuracy

3.1 Overall accuracy

A survey like the Household Budget Survey is subject to a number of inaccuracies. Most errors and shortcomings are not of a kind that can be measured, and it is therefore not possible to measure the total inaccuracy in the survey.

The sample-related coefficient of variance for total consumption per household is estimated at less than 1 pct. The coefficient of variance is estimated on the assumption that the sample is simple and random, which is not the case, because the sample is a cluster sample within geographically defined areas. Therefore, the coefficient of variance underestimates the actual sample error.

The total inaccuracy of which the sample related coefficient of variance is only a part can, as noted, not be measured, because it is not possible to measure the other types of errors. What other kinds of errors should be taken into account are described in the next section.

In general, the inaccuracy is higher, the more detailed level data are broken down to and the fewer households on which the average is based.

3.2 Sources of inaccuracy

Coverage:

The survey is based on a sample, where the final number of households in the latest survey is 2,581 from the total of 2.554 million private households in Denmark (estimated in the Household Budget Survey).

Persons living in different kinds of shared households (prisons, hospitals and other institutions) are not included, because it is difficult to separate the private economy from the shared economy. In principle, the latest survey covers 5.347 millions persons out of the total population of 5.391 million persons.

Sample:

The latest survey consists of data from 2,581 private households, randomly chosen within a number of defined geographic areas, which all together give a good coverage of different parts of the country, city types etc.

The gross sample is 4,500 occupied addresses, from which 57.8 pct. participated in the 2002-2004 Survey. The non-response was 42.2 pct. A response rate of this size is considered to be fair especially when considering the extensive efforts related to participation for the responding households.

Also in comparison with similar surveys conducted in other countries, the response rate is satisfactory.

Participation in the survey is of course voluntary. Statistics Denmark is not able to give any real payment, but the participating households receive a gift and participate in a lottery in return for their participation.

Data collection:

The data sources are interviews, diaries and administrative data, where different kinds of inaccuracies are associated.

- The households *lack of memory* might influence the interview, because it can be difficult for the household to remember, if a specific expense was made 11 or 13 months ago.
- In keeping the diary the household can *forget* to register certain expenses especially at the end of the two-week period. Analysis has shown that more expenses are registered in the first week than in the second. To adjust for this forgetfulness, all diary data from the second week are enumerated with 4 pct.
- The households *lack of knowledge* might influence the quality of the difficult questions about insurances.
- The households *reluctance* to give correct answers might cause a problem. For instance, it is possible that answers about undeclared work is faulty and therefore give underestimated values, because some households have been reluctant to answer correctly. The same problem might affect answers regarding consumption that is illegal (e.g. narcotics) or in some way is perceived as problematic (e.g. a large consumption of alcohol). In general though the impression is that the participating households are both willing to answer questions and to be honest. An imbalance rather occurs because households with something to hide do not participate in the survey.
- *Errors and shortcomings in the administrative register data* might cause a problem. For instance, it cannot generally be expected that the tax authorities always correct incorrect data if there is no tax-related consequence. Furthermore, register data are defective for households where a person has died and for households which were not assessed ready (typically with complicated income and tax) at the time the data was obtained by Statistics Denmark.

Non-response:

Non-response is unwanted for two reasons: It weakens the final output, because fewer households participate, which makes the inaccuracy greater. But more troublesome it adds bias to the results, when the non-response is unevenly distributed between the households.

The non-response is especially large among households with just one person or with 7 and more persons, among the elderly, among retired persons, among households with low income and in the metropolitan area and in municipalities with cities having between 40,000-99,999 inhabitants. Conversely, the non-response is small among households with 4 persons, among households where the oldest person is between 20-29 years old, among wage earner households, among households with an income between DKK 500.000-799.000 and in municipalities with cities having between 10,000-19,999 inhabitants.

To partly neutralize the bias from the non-response and the sample, the values are weighted.

Household types where the non-response is large, and which are consequently underrepresented in the survey, are assigned a relatively large weight, and households which are overrepresented are assigned a relatively small weight.

In most tables, information about the estimated number of households in Denmark as well as the actual number in the survey is included. The latter information is important when assessing the inaccuracy, because a small number of households in a given group cause greater inaccuracy.

From the 2002-2004 survey a new method to calculate weights was implemented. Before the weight was calculated by post stratification, where the sample and the population were split into a number of identical strata, constructed from the combination of 6 characteristics: Household size and composition, income, the main income earners socioeconomic status, if the household owns or rents the dwelling and in what type of city area, the household lives. The principle is then that households consisting of 1 person, with an income of DKK 300.000, who is a wage earner, who rents his dwelling and who lives in the metropolitan area is assigned a weight, which is equal to the number of this particular type of household in the population.

In the new method the weight is calibrated using a regression estimate. The focus is no longer on the combination of characteristics, but rather on the individual characteristic in the relationship between sample and population. The advantage with the calibration method is that more characteristics can be included. Apart from the already mentioned characteristics, level of education, gender, geography and other characteristics are included as well, at the same time as the above-mentioned characteristics are split into more detailed groups. The new method gives therefore more precise estimates among those characteristics that are included, than was the case with post stratification.

Processing of data:

An extensive checking and processing of the data is carried out comprising e.g.:

- For all amounts given by the households, it is checked if the size of the amount seems reasonable. For the interview-based data this is done at the visit to the households and corrections are made directly.
- For a number of data it is checked for the logical coherence.
- It is checked that there is a reasonable coherence between the income and the uses of income.

3.3 Measures on accuracy

See the description in part 3.1.

For the consumption the inaccuracy is greatest for goods seldom bought, for data from the diary rather than the interview, and for data from small subgroups of households rather than large.

4 Comparability

4.1 Comparability over Time

From the start of the 'new' survey in 1994 the data are highly comparable.

It should be noticed that the data to one year's update is collected in 3 years. When next year's update is computed it is done by changing the oldest year from last year's update with a new year. This means that in 2 different year's versions just 1/3 of the households are changed. When comparing data from different years it is therefore advised always to go at least 3 years back.

Comparison back in time is hampered, as the definitions and classifications have been widely changed.

4.2 Comparability with other Statistics

The classifications and definitions used are aimed to be as comparable as possible with the national accounts. But the methods, etc., in these two kinds of statistics are very different.

The classification of consumption is based on the international COICOP classification, which is also used in compiling price indices.

It is difficult to conduct comparisons with the general population statistics and other register-based statistics, as the household definition in the survey is different: In the survey the household definition is the economic unit, which is decided by the household members themselves, while in the general population statistics the household definitions are derived from the administrative registers-based information.

4.3 Coherence between provisional and final statistics

Only final figures are published.

5 Accessibility

5.1 Forms of dissemination

General publication in

- *Nyt fra Danmarks Statistik* (News from Statistics Denmark)
- *Indkomst, forbrug og priser* (Income, consumption and prices) appearing in the series *Statistiske Efterretninger* (Statistical News).
- *Statistical Yearbook* www.dst.dk/HomeUK/Statistics/ofs/Publications/Yearbook.aspx
- www.statbank.dk/fu1, [fu2](http://www.statbank.dk/fu2), [fu3](http://www.statbank.dk/fu3) and [fu4](http://www.statbank.dk/fu4).

To this is added e different publications focusing on specific topics, e.g. education and consumption, geographic difference in consumptions patterns and the difference between households with high and low income.

EUROSTAT publishes data from the Danish surveys as well as from the other Member States about every 5th year. These EUROSTAT publications do not always use exactly the same definitions, etc., as in the national publications.

5.2 Basic material: Storage and usability

The data from the survey is stored as SAS-datasets on the PC-network.

On the basis of the micro data it is possible to make special tabulations, etc.

It is also possible for researchers to have access to the micro data under certain restrictive conditions.

5.3 Documentation

A detailed documentation is published in the book 'Forbrugsundersøgelsen. Metodebeskrivelse. Fra dataindsamling til offentliggørelse'. Statistics Denmark 1999. ("The Household Budget Survey. Methodological Description. From Data Collection to Publication").

A special paper (in Danish) on the possibilities of obtaining statistics on smaller geographic areas can be obtained by contacting the Section for the Household Budget Survey.

5.4 Other Information

Other information can be obtained by contacting the Section for the Household Budget Survey.

6. Supplemental documentation

No supplemental documentation is available

Census of Buildings

This declaration was transferred to the Internet on 7 July 2006

0 Administrative Information about the Statistical Product

0.1 Name

Census of Buildings, 1st January

0.2 Subject Area

Construction and housing

0.3 Responsible Authority, Office, Person, etc.

Manufacturing and Construction
Karina Buchwald, tel. +45 39 17 33 17, e-mail: kbu@dst.dk

0.4 Purpose and History

The purpose is to produce statistics on the stock of buildings.
This was made possible when the Central Register of Buildings and Dwellings Register was established, April 1, 1977.

Statistics Denmark published statistics on the stock of buildings April 1, 1977 and January 1, 1981. From January 1, 1986 Statistic Denmark has produced figures every year.

0.5 Users and Application

Users: Municipalities, counties, government departments, private and semi-private organisations and firms, the news media and private persons.
Application: Public and private planning, education and public debate.

0.6 Sources

The Central Register of Buildings and Dwellings and the Central Population Register. The Central Register of Buildings and Dwellings consists of a register on building permits, new buildings, extensions and alterations and a register on buildings with building inspectors' certificate.

The Central Register of Buildings and Dwellings was established in 1977 (Act No. 243 of May 12, 1976). The purpose was to make coherent registrations of building and dwelling conditions for public planning and administration. The main purposes were the public tax assessment of real property and the population and housing census. For mainly municipal uses, several other purposes have later been added to the use of the register.

0.7 Legal Authority to Collect Data

Acts on Statistics Denmark

0.8 Response burden

No response burden.

0.9 EU Regulation

Necessary according to Council Regulation (EC) No. 2223/96

1 Contents

1.1 Description of Contents

The statistics are compiled from a full-scale census, 1st January. Small buildings (e.g. garages, carports, outhouses) are excluded from the stock.

The statistics describe the stock of buildings analysed by type of use, size, ownership, heating installation, roof covering and external cladding materials, water and effluent installations, and year of construction.

1.2 Statistical Concepts

The statistical unit is the building.

A building is defined as a coherent construction built on a separate real property, and which is mainly constructed using uniform materials and with has approximately the same number of floors. Furthermore, there must be entrance facilities from the street.

Building spaces:

All measurements of living and working spaces include the exterior walls or for attics a line in the floor drawn where the distance between the roof and the floor is 1,25 metre. Attic spaces, not usable for living space or business space (not usable attic) and

space of semi-basements are not registered.

The *building ground space* (area built on) is equal to the groundfloor space. The space of open terraces and open balconies is excluded from the building ground space.

Space above the ground equals the sum of storey space (attic space and basement attic are excluded).

The *potential utilized attic space* is the sum of the utilized attic space and the unutilised attic space.

The *basement space* includes the space of floors below the groundfloor.

The *total building space* equals the sum of the space of the groundfloor, the potential utilized attic space and the basement space.

The *living space* is the part of the total building space used for residential purposes.

The *business space* is the part of the total building space used for industrial, commercial and institutional purposes.

Main use of the building:

The actual use is registered. If the building is used for several purposes, the use taking up the greatest space is registered. The registration makes it impossible to split up buildings used for offices and buildings used for commercial purposes.

External cladding materials:

External cladding materials are the materials used for the outside surface of the building. For example, a building with a concrete wall and a facing wall constructed by bricks will be registered as bricks. If several exterior walls materials are used, the material taking up the greatest space is registered.

2 Time

2.1 Reference Period

The reference period is 1st January.

2.2 Date of Publication

Due to possible delays owing to changes before January 1 but registered within a 3-month period after January 1, the production time is estimated at 6-7 months after the reference period.

2.3 Punctuality

Usually no delays

2.4 Frequency

Yearly.

3 Accuracy

3.1 Overall accuracy

A survey of the overall accuracy of the Central Register of Buildings and Dwellings has never been conducted. But the degree of unknown variables is small.

According to the rules and regulations laid down by the Ministry of Economics and Business Affairs, public authorities and owners of buildings are asked to provide information for maintaining the register. Owners are obliged to ensure that real and actual figures are continuously supplied. At the same time, the extensive administrative use of the register by the municipalities also insures a high data quality.

3.2 Sources of inaccuracy

The Central Register of Buildings and Dwellings Register was established in 1977 by compiling information collected from owners of real property. Figures on living space and time of construction for older buildings may be subject to errors. Especially in cases where the building has not later been involved in an administrative building or development case. This is, of course, due to the lack of accurate data by the owners as far back as 1977.

3.3 Measures on accuracy

None

4 Comparability

4.1 Comparability over Time

With the following exception the data are consistent back to January 1, 1986.

From 1981-1987 the type of ownership was not maintained by linking data with the Real Property Taxation Register, but only due to the municipal administration of building and development cases.

4.2 Comparability with other Statistics

A complete comparability with the statistic of constructions is, for several reasons, not possible:

- The statistics on the buildings stocks contain information on the number of buildings and the total building space January 1, indicating knowing the construction year of the buildings. The difference in the number of buildings and total building space between two years is a net figure (registration and deregistrations). The statistics on constructions give a gross figure for the number of new buildings and their total buildings space.

If no building permit has been obtained, changes in information, e.g. between occupations for residence or non-residence, is undertaken directly in that part of the Central Register of Buildings and Dwellings which comprises building inspectors' certificate.

4.3 Coherence between provisional and final statistics

Only final statistics are published

5 Accessibility

5.1 Forms of dissemination

Continuous publications: The statistics are published in *Nyt fra Danmarks Statistik* (News from Statistics Denmark), in *Byggeri og boligforhold* (Construction and housing) appearing in the series *Statistiske Efterretninger* (Statistical News).

Yearbooks: The Statistical Yearbook and in the Statistical Ten-Year Review.

Website: www.statistikbanken.dk

5.2 Basic material: Storage and usability

The following information for buildings is stored on magnetic tape:

Information on identification and geographic divisions:

Address (municipality no., road no., house no./-letter, floor, door no.)

Property identification

Building identification

Postal no. (from January 1, 1986)

Parish no. (from January 1, 1986)

Town no. (from January 1, 1986)

Information on building:

Main use (all-year residence, production, office, trade and commercial use, cultural use, education and hospitals, leisure)

Year of construction

Type of heating installation

Type of roof and external cladding materials

Spaces in square metres

Number of dwellings in the building

Number of floors

Information on property:

Type of ownership

Water and effluent installations

This information can be combined in a variety of ways intended for for different statistical purposes and analyses.

5.3 Documentation

The variables and recordlayout are documented in Danish in the TIMES database established by Statistics Denmark. The documentation is, however, only available in Danish and can be found on www.dst.dk under "dokumentation".

Documentation for each dwelling variable is also given in a Danish manual "BBR instruks" (only available in Danish) prepared by the National Survey and Cadastre. The manual can be found on the following website (National Agency for Enterprise and Construction) www.ebst.dk under "Bolig", "BBR", "BBR-loven".

5.4 Other Information

Other information is not available.

6. Supplementary Documentation

No supplementary documentation is available

Construction

This declaration was transferred to the Internet on 20 December 2005

0 Administrative Information about the Statistical Product

0.1 Name

Construction

0.2 Subject Area

Construction and housing

0.3 Responsible Authority, Office, Person, etc.

Manufacturing and Construction

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0.4 Purpose and History

The purpose is to produce statistics monitoring total construction activity (measured by total floor area) and total residential construction (measured by numbers of dwellings). It is possible to monitor many aspects of the construction activity, but the statistics are mainly published in accordance with some main categories: Type and use of building and state of the building project (permitted, started, completed and under construction).

Information on residential construction is available from 1876 for the municipality of Copenhagen, for the municipality of Frederiksberg from 1886, for provincial towns from 1916, for parishes with larger urban areas from 1929 and for all Denmark from 1950. Estimates on floor area were not established until the end of the Second World War. Since 1980, the statistics have been compiled on the basis of the Central Register of Buildings and Dwellings (BBR).

0.5 Users and Application

The statistics have three main purposes: planning, market analyses and analyses of main indicators.

The primary use of the statistics is to monitor trends in the market for construction. These trends are among other things used in public debates concerning national economic matters.

The statistics are used by a wide range of users, from both the private and the public sector. From the private sector users are mainly large companies and business organisations, while mainly ministries and municipalities represent the public sector.

0.6 Sources

The construction statistics are compiled on the basis of data extracted from the Central Register of Buildings and Dwellings, which was established in 1977 (Act No. 243 of May 12, 1976) and put into service from 1980. For updating a building statistics register Statistics Denmark receives monthly data from the Central Register of Buildings and Dwellings.

0.7 Legal Authority to Collect Data

Subsection 1 of section 6 of the Act on Statistics Denmark and the Act of BBR (no. 406 of 28. May 2003).

0.8 Response burden

As the BBR is an administrative register, there is no response burden.

0.9 EU Regulation

Council Regulation (EU) no. 1158/2005 amending Council Regulation of May 19, 1998 on Main Indicators. According to these regulations construction permits for residential buildings and for non-residential buildings are required. The reference period is minimum every 3 months.

The Regulations had replaced a Directive from February 13, 1978.

1 Contents

1.1 Description of Contents

The construction statistics are compiled on the basis of data extracted from the registers on buildings and dwellings.

The statistics are based on building permits, etc. compiled by the municipalities, when construction results in an increase of the floor area or the number of dwellings. The statistics show the state of the building projects (permitted, started, completed and under construction) with information on type of building and type of ownership. Because of delays in the municipalities'

registrations in the Central Register of Buildings and Dwellings provisional figures are published, which give an estimate of the construction activity.

1.2 Statistical Concepts

The data reported by the municipalities are based on the actual building permits, which implies that in cases where a building permit is not required data are not reported. The National Agency for Enterprise and Construction decide the extent and requirements. For more information on variables and their definitions, see www.ois.dk.

The statistics monitor all building permits, which increase the floor area or the number of dwellings. Building projects are grouped by their state:

- Building permits: The permit given by the municipality for starting a construction within a given period. The building permit will be annulled, if the construction is not started within a year. Some construction did not require a building permit, but only a notification. In statistical context, the building permit and the notification are the same
- Start of construction: The date for the physical start of the construction. For non-residential buildings used for agricultural purposes etc. and small buildings (garages, carports and outhouses) the date of the building permit and the date of the construction started are similar. This kind of building is treated less strictly according to the Act.
- Completion of construction: A certificate for use or provisional use is given or for reasons where the construction is completed and no certificate is needed.
- Under construction: A building stock of building activities, which have started but not yet completed at a certain time (normally, at the end of the reference period).

The Central Register of Buildings and Dwellings monitors 3 units:

- Property
- Building
- Unit in Building

The property unit identifies the public tax assessment of real property. *The building* is defined as a coherent construction built on a separate real property, and which is mainly constructed using uniform materials and with approximately the same number of floors. Furthermore, there must be entrance facilities from the street. *A unit* in a building is defined as one or several coherent rooms etc. used for residential or non-residential purposes. It is decisive that the unit can be independently addressed.

The statistical unit for construction statistics is the building. The property unit is used for identification and the units in the buildings submit figures on floor area and numbers of dwellings.

The unit of counting is the floor area or dwelling. Buildings are in some cases equal to building permits:

- The statistics use different terms for spaces. The most important terms are: The *total building space* equaling the sum of the space of all floors, the potentially utilized attic space but not the basement space and the *building ground space* (area built on), which is equal to the ground floor space.
- The term dwelling is delimited by the unit in a building, which is an all-residential unit, a combined residential and non-residential unit or a room (with a unique address.). The basic point is, that the dwelling shall be sanctioned to be used throughout the year

In the Central Register of Buildings and Dwellings each building permit has several variables with information. The most important variables are:

- *Main use of the building*: The actual use is registered. If the building is used for several purposes, the use accounting for the greatest space is registered. The classification has 5 classes and 27 objects. The classes are residential buildings (weekend cottages excluded), production buildings, warehouses farm buildings, industry and manufacturing buildings, public works etc., buildings for administration and trade, transport, personal services, buildings for cultural purposes plus institutions and other buildings.
- Type of builders: Private, housing societies and public builders (determined by the ownership).
- Construction materials: external cladding, type of roof and type of heating.
- Geography: Counties and municipalities.

The purpose is to monitor quarterly construction activities in terms of absolute figures. The statistics are estimated using monthly data from the Central Register of Buildings and Dwellings. During the time of producing the statistics Statistic Denmark has noted that there are delays in the municipality's data registrations. This makes it necessary to estimate provisional figures to be used for measuring construction activities. See 3.1.

There are delays when the monthly data received contain information concerning the previous months.

The quarterly publications also contain a seasonally adjustment of the four main time series: started and completed floor area and started and completed dwellings.

2 Time

2.1 Reference Period

The time of reference is the dates of the states of the building projects, e.g. the date of commencement of the construction

activity. The statistics are quarterly.

2.2 Date of Publication

The statistics are published quarterly (contain figures for both months and quarters). The quarterly statistics are published in the middle of May, August, November and February.

2.3 Punctuality

The quarterly statistics are published according to schedule.

2.4 Frequency

The quarterly statistics are published about 1½ months after the referencequarter.

3 Accuracy

3.1 Overall accuracy

A survey of the overall accuracy of the statistics has never been conducted.

The main source of inaccuracy is the delays in the municipality's data registrations in the Central Register of Buildings and Dwellings. The estimates made by Statistics Denmark attempt to address this problem :

- The state of the building permit.
- Floor area or number of dwellings.
- The classification: Use of Building.
- New building or conversion of buildings, etc.
- The classification: Ownership
- The raising-factors are re-assessed annually

An ongoing revision at the times of publication, taking into account the delays observed.

For each state of building project a raising-factor is estimated using analyses of regression for delays observed in the last 5-6 years. These raising-factors are re-assessed yearly. The most recently final annual statistics are included in the basis of compilation basis, and the oldest statistics are omitted.

No estimate is made for the geography and the number of buildings.

Statistics Denmark has conducted a survey of the statistical accuracy which shows that:

- The estimated number of dwellings have a higher quality than the total construction measured by floor area.
- The highest delay is observed for the state of the building project: Started construction.
- Typically, it takes 7-8 months before the estimates reach an acceptable quality for the start of constructions (total figures) for a given month. It takes 3 months for the state Completion of the construction activity (total figures).

3.2 Sources of inaccuracy

There are several sources of inaccuracy in estimating the provisional figures for construction activities.

The two main sources of inaccuracy are:

1. The observed delays in the municipality's registrations. It shows that there is no constant pattern, caused by several different reasons, e.g. lack of resources, inexpedient administration and owners' delay in reporting data to the municipalities. The latter circumstance is especially a problem for the start of constructions and because of the special administrations for buildings used for farming and small buildings, where only a registration of the start the construction is needed.

2. A problem related to the method of estimation:

The chosen method of estimation needs the capacity to catch the full effect on the fluctuations in the market in the short run.

Experience shows that the higher construction activities, the more delays and vice versa. This is the reason why the methods in the short run give an under-estimation of the activity in a period of high activity and an over-estimation in a period of low activity.

3.3 Measures on accuracy

For the time being there is no estimates for the accuracy. The objective for the estimates of the activity is plus/minus 5% compared to the first published figures.

4 Comparability

4.1 Comparability over Time

Datacomparability over time is only possible from the year 1980.

Before 1980 we have different geographic degrees of coverage and some differences in definitions. For the completed construction activities, estimates are available:

- January 1950 - March 1960: The metropolitan area plus the 5 largest towns and their suburbs (degree of coverage: around 35%).
- April 1960 - December 1968: The metropolitan area plus the 18 largest towns and their suburbs (degree of coverage: around 50%).
- January 1969 - March 1970: Urban areas with more than 10,000 inhabitants (degree of coverage: around 50%).
- April 1970 - December 1972: Urban areas (degree of coverage: around 70%).
- January 1973 - December 1979: All Denmark (degree of coverage: 100%)

Furthermore, for the year 1979 the statistics of construction activities, based on questionnaires, are compared with the statistic based on the Central Register of Buildings and Dwellings. The new method proved to have 20% more floor area and 5% more dwellings, measuring the start of constructions.

4.2 Comparability with other Statistics

The only statistics where comparability is possible are the statistics on the building stock and the housing censuses.

Because of several differences complete data comparability is not possible:

- The problem of delays in the construction statistics.
- The registrations of burnt and demolished buildings are not complete in the construction statistics. The statistics on constructions give a gross figure for the number of new dwellings and new floor area. The housing censuses give net figures
- Comparing the housing censuses and the construction statistic the definition of dwellings differs. The housing censuses include buildings and units of buildings which are linked to an address in the Central Population Register (CPR). The construction statistics include dwellings registered as all-year-residential-dwellings, e.g. excluding weekend cottages.
- Furthermore, data registered directly in the building stock, without building permits, are observed.

4.3 Coherence between provisional and final statistics

Because of the problem of delays, there are not produced final figures.

5 Accessibility

5.1 Forms of dissemination

The statistics are published in *Nyt fra Danmarks Statistik* (News from Statistics Denmark), in *Byggeri og boligforhold* (Construction and housing) appearing in the series *Statistiske Efterretninger* (Statistical News), in *Konjunkturstatistik* (Main Indicators), in the Statistical Yearbook and in the Statistical Ten-Year Review and also in Statbank Denmark.

5.2 Basic material: Storage and usability

Every month the Local Government Data Centre a batch of the data reported in the previous to the Central Register of Buildings and Dwellings is submitted by the Local Government Data Centre to Statistics Denmark. On the basis of these data the Buildings Statistics Register operated by Statistics Denmark is continuously updated.. The register keeps information on all construction activities in progress, including all buildings registered as completed.

The Buildings Statistics Register stores the following information:

- Information on identification and geographic location
- The state of the building permit
- Type of use of dwelling
- Type of ownership
- Type of heating installation
- Number of dwellings/rooms
- Type of roof and external cladding materials
- Spaces in square metres for residential and for non-residential purposes.
- Number of floors
- Toilet, bathing and kitchen facilities
- Etc.

5.3 Documentation

Documentation, on a detail level, is given in a Danish manual prepared by the National Survey and Cadastre (BBR-instruksen) or www.ois.dk.

5.4 Other Information

6. Supplerende dokumentation

No supplementary information is available

Construction cost index for residential buildings

This declaration was transferred to the Internet on 15 December 2005

0 Administrative Information about the Statistical Product

0.1 Name

Construction cost index for residential buildings, new

0.2 Subject Area

Construction and housing

0.3 Responsible Authority, Office, Person, etc.

Manufacturing and Construction

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0.4 Purpose and History

The purpose of the construction cost index for residential buildings is to measure the development in construction costs.

The present construction cost index is published from the first quarter 2003 and replaces the former construction cost index which has been published from 1987 until the second quarter 2003.

0.5 Users and Application

The construction cost index has two primary purposes. The index is used for contract regulation and to follow the economic development in construction costs.

The users of the construction cost index are construction organisations, contractors, building owners, lawyers, public authorities and the EU.

0.6 Sources

The construction cost index is based on eight concrete buildings:

- Three one-family houses
- One terraced house
- One semi-detached house
- Three multi-family houses

The data for the eight types of buildings are obtained from five different contractors of different size and geographic location.

Prices for materials and equipment are mainly collected from the Price Index for Domestic Supply. The prices are collected every month and are collected from producers and importers, cf the declaration of contents for Price Index for Domestic Supply.

The prices for the total labour costs are mainly collected from the Indices of Average Earnings for the Private Sector. The prices are collected each quarter and refer to the second month of the quarter, cf the declaration of contents for Indices of Average Earnings for Private Sector.

0.7 Legal Authority to Collect Data

Data are collected in accordance with the Act on Statistics Denmark.

0.8 Response burden

There is no direct response burden since the data are collected by others.

0.9 EU Regulation

Council Regulation (EC) No 1165/98 and Commission Regulation (EC) No 588/2001.

1 Contents

1.1 Description of Contents

The construction cost index for residential buildings is also divided into an index for one-family houses and one for multi-family houses. All indices are further more broken down into eight sub-indices by profession and six sub-indices by building parts. Both the total indices and the sub-indices are divided into material and labour costs.

Sub-indices by profession:

- Earth- and concrete work
- Concrete slab work
- Bricklaying
- Carpentry
- Joinery
- Painting
- Heating and sanitary engineering
- Electrical work

Sub-indices by building parts:

- Subgrade
- Raw buildings/carcass
- Completion of buildings
- Heating and sanitary installations
- Electrical and mechanical installations
- Fixtures

From the second quarter 2005 a special index for glazing is further more calculated. The index is not included in the construction cost index but is financed by the Glaziers organisation in Denmark.

1.2 Statistical Concepts

The construction costs index is based on eight actual building projects of different kinds:

- Three one-family houses
- One terraced house
- One two-family house
- Three multi-family houses

The buildings are typical of the present house building. They have been chosen on the basis of an analysis of the present house building from the Central Register of Buildings and Dwellings (BBR).

The building accounts for the eight buildings are obtained from five different contractors of different size and geographic location. A consulting engineer specialised in pricing have been involved in the further work with the building accounts.

The building accounts are prepared so that for each production part (e.g. installation of a concrete wall) it is stated which materials (e.g. concrete), which equipment (crane) and which work function (concrete slab work) that are involved and what the costs are.

To each material, equipment and work function a source of prices is attached.

The concept of material prices is until 2004 actual transaction prices ex producer/importer, excluding VAT and excise duties, and taking both general and specific discounts into consideration. From April 2004 the importers buying prices are collected instead of as previously the selling prices. The price concept for the importers is from here actual transaction prices c.i.f. excluding all duties and taxes on the goods.

The price concept of labour costs is the actual earnings plus other labour costs. The actual earnings include the employee's total earnings, including both the employer's and the employee's payments to the employee's pension scheme. Other labour costs include the part of the enterprises total labour costs that are not a part of the employees earnings such as social contributions, educational costs and other voluntary labour costs.

From the second quarter 2005 the method for calculating labour costs has been changed. Persons with great fluctuations in labour costs from one quarter to another are no longer included in the calculations. These great fluctuations are caused by special circumstances that should not have an influence on the calculation of labour costs.

The construction costs index illustrates the development of costs incurred by contractors in the construction process. It is a so-called input index and includes costs of materials, labour costs, installations, equipment, transportation, energy. On the other hand, the contractor's profit, fees for architects and engineers, costs for the building site and VAT are not included.

The index is calculated according to Laspeyres formula using fixed weights.

The construction costs indices for residential buildings in general, for one-family houses and for multi-family houses are divided into sub-indices by profession and by building parts. These sub-indices are further divided into materials and labour costs.

Sub-indices by profession:

- Earth- and concrete work
- Concrete slab work
- Bricklaying
- Carpentry
- Joinery
- Painting
- Heating and sanitary engineering
- Electrical work

Sub-indices by building parts:

- Subgrade
- Raw buildings/carcass
- Completion of buildings
- Heating and sanitary installations
- Electrical and mechanical installations
- Fixtures

From the second quarter 2005 a special index for glazing is further more calculated. The index is not included in the construction cost index but is financed by the Glaziers organisation in Denmark. The index is a weighted aggregate of indices for labour costs and costs of materials.

2 Time

2.1 Reference Period

The construction cost index for residential buildings is calculated quarterly for the 15th of February, 15th of May, 15th of August and 15th of November. The reference periods are, the 1st quarter by the 15th of February, the 2nd quarter by the 15th of May, the 3rd quarter by the 15th of August and the 4th quarter by the 15th of November.

2.2 Date of Publication

The construction cost index for residential buildings is published quarterly at the beginning of March (4th quarter), the middle of June (1st quarter), the beginning of September (2nd quarter) and the beginning of December (3rd quarter).

2.3 Punctuality

The statistics are generally published without delay in relation to the scheduled publication date.

2.4 Frequency

The statistics are published every quarter.

3 Accuracy

3.1 Overall accuracy

The index is based on the development of about 200 representative goods which is split up into about 20 work functions, about 170 types of materials and about 15 types of equipment. To each representative goods a number of prices/goods are attached. The representative goods are chosen from the building accounts for the eight buildings and are chosen according to a principle of importance and representativity.

3.2 Sources of inaccuracy

The construction cost index for residential buildings covers the typical house building in Denmark. The eight concrete buildings have been chosen on the basis of an analysis of the typical house building from the Central Register of Buildings and Dwellings (BBR).

Prices for materials and equipment are mainly collected from the Price Index for Domestic Supply, cf. the declaration of contents for Price Index for Domestic Supply. The prices for the total labour costs are mainly collected from the Indices of Average Earnings for the Private Sector, cf. the declaration of Indices of Average Earnings for the Private Sector. All prices are collected by questionnaires.

When calculating the development in construction costs, only materials, equipment and persons that are present in two consecutive quarters are included.

The collected data are subject to different types of practical controls, by an investigation of the collected data.

3.3 Measures on accuracy

Measures on accuracy are not available.

4 Comparability

4.1 Comparability over Time

It is possible to chain and compare the new construction cost index for residential buildings with the former construction cost index. However, when comparing the two indices it should be borne in mind that it is not the development of prices for similar buildings that are compared but different kinds of buildings that are constructed using different techniques, materials and in periods with different legal demands. This means that not only the weighting scheme but also the methods for collecting prices and calculating the indices are different.

There have been changes the following years:

The first construction cost index was published in 1920 and was an *index for smallholding* (indeks for husmandsbrug). The index had base year in 1914. The house was not very well described. Only that it contained 3 rooms, kitchen, laundry and stable. Because of that there were great inequalities in the data reported by the cost surveyors.

In 1926 a new collection of information about a specific type of house was started. By that means it was possible to follow the price development independent of any improvements of the furniture in the house. This index was revised in 1959 when it was decided to use a farmhouse and a farm building from a type book of the ministry of agriculture. 1959 was base year. Calculation of this index was finished in 1970.

In 1940 a new monthly index for a block of flats was published. This index should measure the development in the costs of residential construction. Base year for this index was 1939. This index was replaced in 1955 by a quarterly index. The weighting scheme of the quarterly index was established on an index house. This index house was a residential construction in 3 storeys with 6 staircases and 36 apartments. In this index 1955 was base year. It was still calculated in 1972 for the sake of long-term contracts even if new indices were published from 1969 and 1971. These two new indices were construction cost indices for one-family houses and a block of flats. As a new concept there were calculated indices by profession and by building parts.

The former construction cost index replaced the two indices for one-family houses and a block of flats in 1989. 1987 is base year. The change from two to one index was made because there was no longer any significant difference between the method in construction and choice of materials.

The present construction cost index is once again divided into an index for one-family houses and one for multi-family houses and thus meets the demands from the users of the index. 2003 is base year.

Differences in classification: As mentioned above only one total construction cost index was published until the publication of the two indices for one-family houses and a block of flats in 1969 and 1971. Hereafter, indices were calculated by profession and by building parts.

Differences in the concept of price: The monthly construction cost index published from 1939 to 1955 was calculated on the basis of information from the Wholesale price index about 20 of the most important construction materials. The labour costs were calculated on the basis of changes in the collective agreed wages in the construction industry. The index included in this way the direct expenses and excluded cost of engineers and architects. In 1955 the concept of price was changed. After this Statistics Denmark collected prices for 132 of the most important or most representative materials. The collected prices were net prices i.e. the invoice prices the master had to pay the supplier of materials excluding general discounts and any profits and including any given duty (i.e. including purchase tax (oms) per 1.8.1962 and VAT per 3.7.1967). The labour costs were calculated on the basis of the current price list in the provinces. The price list was based on collective agreements including social contributions among other things allowance for public holiday.

In the two indices published from 1969 to 1989 a larger number of representative goods were used than in the earlier indices. The material cost index was calculated on the basis of gross prices excluding VAT. The material costs excluded masters fee and other profits. The labour cost index was calculated on the basis of price lists in the different construction trades.

The material cost index in the former construction cost index from 1987 was calculated on the basis of list prices and gathered information on producer prices deducted general discounts. The calculation of labour costs was made on the basis of collective agreement wages including compulsory employers' contributions. The former index is comparable with the indices from 1968 and because of the parallel calculation of the indices in the period from 1987 to 1989 it is possible to regulate contracts back to 1968.

The material cost index in the present construction cost index is calculated on the basis of prices collected from the Price Index for Domestic Supply where both general and specific discounts are deducted. The labour cost index is calculated on the basis of the Indices of Average Earnings for the Private Sector which contains information on each employees earnings etc.

4.2 Comparability with other Statistics

The prices for the total labour costs are mainly collected from the Indices of Average Earnings for the Private Sector. The development of the indices of labour costs is not directly comparable to the development of the average earnings for the construction sector.

This is among others caused by the fact that in the Indices of Average Earnings all employees that are employed in enterprises belonging to the construction sector including engineers and administrative personnel are included. In the construction cost index only persons that are directly involved in building activities are included.

In the construction cost index only employees that are present in two consecutive quarters are included. A number of persons are thus excluded compared to the Indices of Average Earnings.

Further more, in the construction cost index the different professions are included in the index with different weights depending on the profession's importance for the total construction costs. The development of some professions' average earnings consequently has greater impact on the index than others.

Prices for materials and equipment are mainly collected from the Price Index for Domestic Supply. These indices are not directly comparable to the indices for materials in the construction cost index. This is caused by the fact that to each representative goods a number of selected goods are attached and by the fact that for calculating each material index a number of representative goods are included using different weights.

4.3 Coherence between provisional and final statistics

Only final statistics are calculated

5 Accessibility

5.1 Forms of dissemination

The statistics are published in *Nyt fra Danmarks Statistik* (News from Statistics Denmark and in *Byggeri og boligforhold* (Construction and housing) which appears in the series *Statistiske Efterretninger* (Statistical News) and in *Konjunkturstatistik* (Main indicators) which appears in the series *Statistikservice* (Statistics Service).

Yearly publications: *Statistical Yearbook* and *Statistical ten-year review*

Statistics are available from Statbank Denmark at: (www.statistikbanken.dk): BYG4, BYG41 and BYG5.

Furthermore, it is possible to subscribe to the construction index by postcards.

5.2 Basic material: Storage and usability

Basis material is stored in a register.

The system for calculating the indices is constructed so that it is possible to produce special indices. The basis in the system is the BC/SfB-Building Board, and within the framework of this Board there are vast opportunities of constructing special customised indices: Examples are:

- Index for a specific building part
- Index for one of the eight buildings
- Index for other kinds of buildings, i.e. office buildings and universities

5.3 Documentation

A further description of the method used is available in:

The publication *Bygge- og anlægsvirksomhed* (Construction industry) which appears in the series *Statistiske Efterretninger* (Statistical News) no: 2003:33.

5.4 Other Information

Further information on the construction cost index for residential buildings is available in Danish at www.dst.dk/byggeindeks.

6. Supplementary documentation

No supplementary documentation is available

Construction cost index for civil engineering projects

This declaration was transferred to the Internet on 15 December 2005

0 Administrative Information about the Statistical Product

0.1 Name

Construction cost indices for civil engineering projects

0.2 Subject Area

Construction and housing

0.3 Responsible Authority, Office, Person, etc.

Manufacturing and Construction

Birgitte Lundstrøm, phone 39 17 30 88, e-mail: bls@dst.dk

Silvija Zivkovic, phone 39 17 35 45, e-mail: siz@dst.dk

0.4 Purpose and History

The purpose of the indices is to show trends in prices for work performed by different contractors in civil engineering projects.

In 1959 the first cost index for road fund work was compiled. In 1967 the index for motorway work was added. In 1976 four new indices were compiled:

Earthwork, etc.

Asphalt work

Concrete structures

Iron and steel structures

The cost index for roads was published for the first time in 1995. This index has replaced the two indices for motorways and highways.

From 1 January 2001 the titles: Construction cost indices for road work changed to Construction cost indices.

0.5 Users and Application

Construction cost indices for civil engineering projects are primarily used in regulating construction contracts.

0.6 Sources

The indices are calculated on the basis of information from the price index for domestic supply and prices for haulage/traffic performance by lorries and wage rate agreements between the Danish Association of Builders and the Danish Specialized Workers' Union.

0.7 Legal Authority to Collect Data

Data are collected in accordance with the Act on Statistics Denmark.

0.8 Response burden

There is no direct response burden since data are collected by others.

0.9 EU Regulation

Necessary on grounds of Council Regulation 2223/96.

1 Contents

1.1 Description of Contents

The indices show trends in prices for work performed by different contractors in civil engineering projects: earthwork, etc. asphalt work, concrete structures, iron and steel structures and sub-indices for haulage/traffic performance by lorries and machinery and equipment. Trends in costs for construction of roads are also monitored.

March 1995 = 100.

1.2 Statistical Concepts

The compilation of construction cost indices is based on prices of materials and labour costs.

Prices of material: are calculated on the basis of information collected for compilation of the price index for domestic supply and prices for haulage. Up till April 2004 the price concept is producers' prices, exclusive of VAT and excise duties, whereas customs duties, import duties and importers' profits are included. From April 2004 the importers buying prices are collected instead of as previously the selling prices. The price concept for the importers is from here actual transaction prices c.i.f.

excluding all duties and taxes on the goods.

Labour costs relate to wage rates fixed by collective agreements between the Danish Association of Builders and the Danish Specialized Workers' Union. The agreements include social costs, i.e. employers' compulsory contributions.

The published index includes unemployment benefits and excludes unemployment benefits, respectively. Average unemployment benefits paid are not calculated, owing to the great variety of tasks, which are, to a smaller or greater extent, dependent on weather conditions, etc.

Weighting: The weighting is prepared in collaboration with the Danish Roads Directorate.

The weighting for the construction cost index for roads is prepared in collaboration with the Danish Roads Directorate on the basis of an analysis of various completed motorway and highway projects. The index is compiled as a simplified form of the other two road indices, as the construction costs indices for earthwork, asphalt work and concrete structures are used directly in compiling the new index. The weighting of the three indices is as follows: 38.0 pct., 41.5 pct. and 20.5 pct.

The weighting of the indices for earthwork, asphalt work, concrete structures, iron and steel structures is prepared on the basis of an analysis of completed and ongoing construction work. In agreement with the Danish Roads Directorate, State Railways and the Danish Association of Builders the weighting is finally determined.

For all indices there are sub-indices covering labour costs and a variety of main commodity groups. However, these indices are not published.

The sub-index for haulage/traffic performance by lorries include among others initial costs for lorries, payment of interest, vehicle excise duty, insurances, wages, administrative costs, fuel, tyres and repairs.

Compilation method: The indices are of the Laspeyres' type, i.e. indices with constant weights. Compilation of the indices is based on index values for labour costs and for each representative commodity. These indices are weighted and a composite index is thus obtained.

2 Time

2.1 Reference Period

Construction cost indices for civil engineering projects are compiled quarterly at the end of March, June, September and December.

2.2 Date of Publication

The statistics are published quarterly at the beginning of February, May, August and November.

2.3 Punctuality

The statistics are usually published without delay in relation to the scheduled date.

2.4 Frequency

The statistics are published quarterly.

3 Accuracy

3.1 Overall accuracy

The statistics are primarily compiled on the basis of data from the price index for domestic supply and wage rates fixed by collective agreements between the Danish Association of Builders and the Danish Specialized Workers' Union. Figures on the statistical reliability are not estimated.

3.2 Sources of inaccuracy

The weighting of the indices for earthwork, asphalt work, concrete structures, iron and steel structures is prepared on the basis of an analysis of completed and ongoing construction work. In agreement with the Danish Roads Directorate, State Railways and the Danish Association of Builders the weighting is finally determined.

The weighting for the construction cost index for roads is prepared in collaboration with the Danish Roads Directorate on the basis of an analysis of various completed motorway and highway projects.

See otherwise the declaration of content for the price index for domestic supply.

3.3 Measures on accuracy

Figures on statistical errors are not available.

4 Comparability

4.1 Comparability over Time

The first cost index for road fund work was compiled for March 1959. A new weighting was established in March 1968.

The index for motorway work was compiled for the first time for March 1967. March 1965 was equal to 100.

In March 1971 when Statistics Denmark began to publish the road indices, the weighting of the indices was adjusted. Simultaneously, the year 1968 = 100.

The calculation of labour costs in the road indices was originally based on actual labour costs. In March 1976 Statistics Denmark began to calculate construction cost indices in which labour costs were based on the collective wage rate agreements. To harmonize the labour cost concepts of the indices, the labour costs in the road indices have also been calculated on the basis of collective agreements since 1976. 1968 is still = 100.

The cost index for roads was published for the first time in June 1996. The aim of the new index was to simplify the index-calculation, as the new index is in future to replace the two indices for motorways and highways. Part of this process of simplification is that the construction cost indices for earthwork, asphalt work and concrete structures are used directly in compiling the new index.

The base year of the construction cost indices as well as the indices for road fund work was changed to end-March 1995 = 100. The indices were until June 2002 also published with the base year 1968.

From 1 January 2001 are the titles: Construction cost indices for road work changed to Construction cost indices.

4.2 Comparability with other Statistics

Prices for materials and equipment are mainly collected from the Price Index for Domestic Supply. These indices are not directly comparable to the sub-indices of the construction cost index. This is caused by the fact that these sub-indices are calculated on basis of detailed indices that are not published in the Price Index for Domestic Supply.

4.3 Coherence between provisional and final statistics

Only final figures are compiled.

5 Accessibility

5.1 Forms of dissemination

The statistics appear in *Nyt fra Danmarks Statistik* (News from Statistics Denmark), in *Byggeri og boligforhold* (Construction and housing) appearing in the series *Statistiske Efterretninger* (Statistical News), in *Konjunkturstatistik* (Main Indicators), in the series *Statistikservice* (Statistics Service).

Annual publications: Statistical Yearbook and Statistical Ten-Year Review.

Statbank Denmark (www.statistikbanken.dk): BYG6 and BYG7

5.2 Basic material: Storage and usability

The primary data are stored in registers. Special processing and linkages of the data are not possible.

5.3 Documentation

Is irrelevant to the statistics.

5.4 Other Information

Is irrelevant to the statistics.

6. Supplementary information

No supplementary documentation is available

ICT expenditure

This declaration was transferred to the Internet on 19 February 2007

0 Administrative Information about the Statistical Product

0.1 Name

ICT expenditure

0.2 Subject Area

Service sector

0.3 Responsible Authority, Office, Person, etc.

Service sector.

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0.4 Purpose and History

The purpose of ICT expenditure is to examine the extent of ICT expenditures in the private and public sector (state and municipalities). This survey contributes to the description of the information society.

ICT expenditure was conducted for the first time in autumn 2004.

0.5 Users and Application

Users: Ministries, industry trade associations, private companies and students.

Areas of use: The governments annual ICT status report plus other ministerial publications, international comparisons, private market analysis, reports at institutions of higher education.

0.6 Sources

The survey is based on a postal questionnaire.

0.7 Legal Authority to Collect Data

The act on Statistics Denmark (Act No. 599 of 22 June 2000).

0.8 Response burden

1.213 hours/355.000 DKK.

0.9 EU Regulation

The European Parliament and the Council regulation (EC) No. 808/2004 of 21 April 2004.
EFTL L 143, p. 49

1 Contents

1.1 Description of Contents

The survey examines ICT expenditure in enterprises and in the public sector (state and municipalities). Variables include hardware, pre-packaged and customised software, other ICT (telecommunication equipment, audio and video equipment and other ICT equipment), ICT services and external ICT training.

Private sector

For enterprises in the private sector, the total ICT expenditure is estimated by industry and size groups. Moreover, expenditure in the different sub-groups of ICT is estimated, see above.

Public sector (state and municipalities)

Concerning the state, total ICT expenditure and expenditure of the different sub-groups of ICT are estimated for ministerial departments, major agencies and universities. Regarding the municipalities, total ICT expenditure and expenditure by sub-group of ICT are estimated for all municipalities. Furthermore, ICT expenditure is also estimated for municipalities with less and more than 15,000 inhabitants, respectively.

1.2 Statistical Concepts

Units and population.

Private sector

The total population consists of 17,000 private enterprises from the business register with at least 10 full-time employees. The majority of industries in the private sector and the financial sector are included in the population. The criterion of industries for being selected is, that they must be a part of The Industrial Accounts Statistics and/or that the industries are presumed to have substantial ICT expenditure. However, the following sectors are not included: Agriculture and electricity, gas, heat and

water supply. Moreover, fishing and mining industries are also excluded.

Public sector (state and municipalities)

The survey includes the majority of the institutions in the state and all the municipalities. Ministerial departments, major agencies and universities are included in the coverage of the state. The total population is identical with the population of the survey Use of ICT in the public sector.

Variables.

ICT expenditure including

- Hardware
- Telecommunication equipment
- Audio and video equipment
- Other ICT equipment
- Pre-packaged software
- Customised software
- ICT services
- ICT training

Own account software:

- Man-years spent on development of own account software
- Development of software for internal use
- Development of software for eksternal use
- Other, i.e. maintenance, support, repairs etc.

Statistical measurements.

ICT expenditure: The sum of expenditure for different ICT expenditure types.

Regarding own account software the sum of development for internal and external use plus other are estimated in proportion to the total number of man-years spent on developing own account software.

Groups.

Private sector

Most tables and charts are broken down by industry and size group. For industries, either the 9 or 27 grouping of Statistics Denmark are applied. Enterprise sizes, measured by number of full-time employees, are grouped in the following way: 10-49, 50-99 and 100+ employees.

Municipalities

Grouped by population: 0-14,999 and 15,000+

2 Time

2.1 Reference Period

Private sector

ICT expenditure follows in general the calendar year or the accounting year of which the closing of the accounts takes place between 1 May and 30 April. Latest survey round covers the period from 1 May 2004 to 30 April 2005, i.e. referred to as 2004 ICT expenditure.

Public sector (state and municipalities)

Calendar year. 2005 is the latest reference year.

2.2 Date of Publication

ICT expenditure is published annually.

Private sector

Date of publication, i.e. the time that goes by between the end of the reference period and the publishing date is approx. 360 days.

Public sector (state and municipalities)
Date of publication is approx. 195 days.

2.3 Punctuality

The statistics are usually published without delay in relation to the scheduled date.

2.4 Frequency

Annually.

3 Accuracy

3.1 Overall accuracy

As the survey is based on a sample in the private sector, all estimates are subject to inaccuracy in form of random variation. In particular, estimates broken down by industry and size must be regarded only as normative. However, the results of the public sector cover a substantial number of the total population.

It must be emphasized that enterprises, state and municipalities are asked to give a *best estimate* of ICT expenditure, which is due to the fact that ICT expenditure not always emerge from the financial statements of an enterprise or a public sector identity.

Sample inaccuracy for certain variables is calculated and indicated when results are published.

3.2 Sources of inaccuracy

Coverage.

Private sector

In relation to the General enterprise statistics 2003 for firms in industries with turnover and export information, the industries and size groups in the survey covers approx. 72 per cent of total turnover and approx. 76 per cent of total employees. As such, not all industries from the General enterprise statistics are included. Moreover, firms with less than 10 employees are left out.

Public sector (state and municipalities)

101 returned questionnaires from state institutions enter into the final data set for the 2005 survey round. Correspondingly, 233 out of 271 municipalities enter into the 2005 data set. For the remaining 38 municipalities no information has been used (loss). Where no information is available, imputation is made such that a missing municipality is identical to a municipality with the same characteristics concerning inhabitants as of January 1st and geographical position.

Sample.

Private sector

The sample is drawn among private firms (legal units) with at least 10 full-time employees. The majority of industries in the private sector are represented. Approx. 17,000 firms make up the total population. The 2004 sample constitutes of 3,076 enterprises and is based on an average of the optimal allocations for different ICT expenditure types. The sample is stratified by industry and size.

Public sector (state and municipalities)

Within the state all ministerial departments, agencies and universities are included. All municipalities are selected.

Data collection.

Data are collected through an annual postal questionnaire.

Loss.

Regarding the enterprises the response rate is 97 per cent for the 2004 survey round. Loss is due to bankruptcy, take over, etc.

For the 2005 survey round the response rate for the state and the municipalities is 96 per cent and 86 per cent, respectively. Loss is due to missing or not applicable responses.

Processing.

Quality check of the collected data is conducted including sum check of the ICT expenditure. Comparison with previous data collections is also carried out where possible. Respondents are contacted for further clarification if found relevant.

Model assumptions.

Private sector

2.919 responses have been used in the 2004 grossing up procedure. The results are grossed up so that they correspond to full coverage of the surveyed industries and size groups. Each enterprise in the sample is assigned a weight such that it represents

a certain number of enterprises in the population. The grossing up procedure is based on the number of enterprises, employment and turnover within employment groups.

Public sector (state and municipalities)

No model assumptions have been used and no grossing up procedure is undertaken.

3.3 Measures on accuracy

Private sector

Measures of inaccuracy for selected variables are published in *Statistical News, Service Sector*.

Public sector (state and municipalities)

There are no sampling errors as the statistics are compiled on the basis of a census, but due to non-response there is some inaccuracy in the estimated figures.

4 Comparability

4.1 Comparability over Time

Private sector

Comparing 2003 and 2004 estimates and taking the sample accuracy into account it cannot be concluded whether or not ICT expenditure has increased or decreased between these two years.

Furthermore, due to the cut-off in the population, an increase in ICT expenses can be caused solely by merging of smaller enterprises below the cut-off to a bigger company above the cut-off.

The method of selection has changed from 2003 to 2004. The sample in 2003 is based on a stratified proportional random selection by full-time employees and industries. The sample in 2004 is based on an average of the optimal allocations for different ICT expenditure types, cf. point 3.2. The 2004 sample is stratified by employment group and industry.

Public sector (state and municipalities)

There is no data collection for calendar year 2004.

The figures for 2005 are not directly comparable with 2003 for pre-packaged software and ICT services due to changes of definitions for these items. This also affects the comparability of the total ICT expenditure.

4.2 Comparability with other Statistics

Comparable statistics are not available.

4.3 Coherence between provisional and final statistics

Only final figures are published.

5 Accessibility

5.1 Forms of dissemination

News from Statistics Denmark and Service Sector (Statistical News)

Yearbook: Information Society Denmark.

Main results are accessible at Statistics Denmark's homepage www.dst.dk/ict.

5.2 Basic material: Storage and usability

Basic material is stored electronically.

5.3 Documentation

More detailed information about methodology is available in the final report in *Statistical News, Service Sector series*, 2006:42.

5.4 Other Information

Other information is not available.

6. Supplerende dokumentation

Til denne varedokumentation findes ingen supplerende dokumentation

EU-trade (intrastat)

This declaration was transferred to the Internet on 1 March 2005

0 Administrative Information about the Statistical Product

0.1 Name

EU trade (Intrastat)

0.2 Subject Area

External trade

0.3 Responsible Authority, Office, Person, etc.

External trade

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0.4 Purpose and History

The statistics analyse the development in Denmark's trade in goods at a detailed commodity level (imports and exports) with the other Member States of the European Union.

The statistics were introduced at the beginning of the EC Single Market 1 January 1993. Previously, these flows of goods were analysed via customs and shipping documents reported by firms to the Customs and Tax Authorities (see declaration of contents for trade with non-EU-countries).

0.5 Users and Application

Public authorities, private organisations and firms, the news media, and private individuals. The detailed figures distributed by commodity-countries are used by trade and industry for market research.

0.6 Sources

Monthly reports from approx. 10,000 firms.

0.7 Legal Authority to Collect Data

Council Regulation (EEC) No 638/2004 of 31 March 2004 concerning statistics on the exchange of goods between Member States with later amendments and addenda, Act on Statistics Denmark, and Consolidated Act No 1495 of 16 December 2004 of the Ministry of Economic and Business Affairs.

0.8 Response burden

The response burden for 2003 has been estimated to amount to 125.7 mill. DKK or 423,491 hours.

0.9 EU Regulation

Council Regulation (EEC) No 638/2004 of 31 March 2004 concerning statistics on the exchange of goods between Member States with later amendments and addenda.

1 Contents

1.1 Description of Contents

The statistics show Denmark's imports and exports of goods from/to the other European Union countries, distributed among partner countries and approx. 10,500 different goods recorded by value, net weight in kilograms and/or supplementary unit. Furthermore, unit value and volume indices are published at a more aggregated level (SITC-chapters, but not distributed among partner countries).

1.2 Statistical Concepts

The statistics are prepared on the basis of reports from Danish companies with total annual imports and/or exports of goods of DKK 1.6m and DKK 4.1m, respectively. The obligation to report is established for imports and exports separately.

For each commodity flow (imports or exports) and month, the following statistical information is gathered:

- Product code in accordance with the Combined Nomenclature CN
- Partner country (imports=country of consignment, exports=country of destination)
- Nature of transaction
- Invoice value in Danish kroner (whole numbers)
- Net weight in kilograms (whole numbers) and/or supplementary unit, e.g. litres, units (if indicated in CN).

The statistics are published at the most detailed level as sums of statistical value (estimated on the basis of the invoice value), net weight, and any supplementary unit for identical occurrences of product code and partner country, some types of transactions are, however, indicated separately (e.g. repair goods). Furthermore, quarterly unit value and volume indices are published at a more aggregated level (SITC-chapters, but not distributed among partner countries).

For each flow of goods (imports or exports), grouping is primarily made on commodity groups (e.g. all goods for which the first two digits are identical, i.e. the chapter level). For the grouping, different nomenclatures are used (KN, SITC rev. 3, BEC and KONJ).

2 Time

2.1 Reference Period

The month in which the goods are received (imports) or shipped (exports) from/to another European Union country.

2.2 Date of Publication

Aggregated statistics for selected countries and country groups and for aggregated commodity groups are published monthly approximately 6-7 weeks after reference period. Detailed statistics are published 11-12 weeks after reference month.

2.3 Punctuality

The Statistics are usually published without delay on the date published on Statistics Denmark's homepage, which is announced at least 3 months in advance.

2.4 Frequency

Monthly.

3 Accuracy

3.1 Overall accuracy

The first publications of the external trade figures are subject to considerable uncertainty, as approx. 20-30 per cent of the data material is either missing entirely or the quantity of imperfect data is so high that it cannot be included at the time of publication. To make up for this, supplementary estimates have to be made. The reliability of figures for a given month is greatly increased by later publications, as estimation is made for missing reports via VAT figures. The final total figures are considered very reliable.

3.2 Sources of inaccuracy

The figures for total imports and exports from/to European Union countries are considered to be of high quality in the final compilation as information can be added via estimation on the VAT return, which covers all transactions of goods between Denmark and the European Union countries. However, it cannot be excluded that companies give imperfect information on the VAT return.

At the detailed level, the reliability of the figures is affected by:

- No reports from companies below the threshold limits
- No response at all from the firms obliged to report, see table below
- Imperfect reports from the firms obliged to report
- Submission of inconsistent information: the relationship between value and net weight in kilograms and/or supplementary unit seems unlikely
- For reasons of resources, it is not possible to examine all reports where (probably) inconsistent information has been submitted.

Response rate for Intrastat

(100 pct. less no-response rate)

	EU-import	EU-export
1993	91,7	93,5
1994	91,5	93,3

1995	91,3	93,2
1996	92,5	93,5
1997	91,9	95,2
1998	90,3	95,4
1999	90,0	94,3
2000	91,7	94,5
2001	90,4	95,6
2002	88,6	93,4
2003	89,7	94,8

3.3 Measures on accuracy

The uncertainty with respect to the final imports and exports figures cannot be quantified, but various comparisons with alternative statistical sources does not indicate a systematic quality problem, please see the paper: *The Quality of the External Trade Figures*.

The uncertainty with respect to the detailed figures distributed by commodity-country is in the order of approx. 10% on average, corresponding to the supplement that is made to the reports from the VAT figures.

4 Comparability

4.1 Comparability over Time

Any gap in the time series as a result of changed collection methods etc. is adjusted for by estimation, which is the reason why the external trade figures are comparable over time.

It goes without saying that data comparability does not apply at the most detailed commodity level as the content of many product codes is changed over time.

4.2 Comparability with other Statistics

The external trade figures are comparable with several other sources:

- The partner country's recording of the same transaction (the mirror transaction). The comparison is hampered by differences in the level of value for the recording of imports and exports (cif and fob, respectively).
- Reports on European Union purchases and sales of goods on the VAT return. These statistics are not published, but are used in the continuous control of the reports to INTRASTAT.
- For the exports of industrial products with figures from the industrial statistics' recording of turnover in export markets. The comparison is made difficult by the fact that the industrial statistics' records are not distributed by country.

4.3 Coherence between provisional and final statistics

As the share of estimated figures is in the order of 20-30 per cent when the statistics are published for the first time, there are a number of deviations between the first and the final publication of external trade figures for any given month.

The inaccuracy on the provisional statistics can be illustrated by the difference between the first provisional statistics and the revised figures. Information on these revisions are presented in the table below for the latest final statistics - 2003.

Revisions (Mill. DKK), 2003

	Numeric	Actual	Numeric	Actual
Imports	--- Mill. DKK ---		-Percent	latest-
- INTRASTAT	26,636	-12,555	10.4	-4.9
- EXTRASTAT	2,552	-55	2.4	-0.1
- I alt	29,188	-12,611	8.1	-3.5
Exports				
- INTRASTAT	29,234	-16,945	10.5	-6.1
- EXTRASTAT	6,351	2,772	4.3	1.9
- I alt	35,585	-14,173	8.3	-3.3
Trade balance				
- INTRASTAT		-4,390		-19.7
- EXTRASTAT		2,828		6.6
- I alt		-1,562		-2.4

5 Accessibility

5.1 Forms of dissemination

The statistics are published in *Nyt fra Danmarks Statistik* (News from Statistics Denmark) (monthly), in the series *Statistiske Efterretninger* (Statistical News) (monthly), in the series *Statistikservice* (Statistics Service) (quarterly), in *Konjunkturstatistik* (Main Indicators) (monthly) and in StatBank Denmark (monthly).

Annual publications: *Statistical Yearbook*, *Statistical Ten-Year Review*, *Denmark's Imports and Exports of Goods* ("Danmarks vareimport og eksport") and *Statistics across Borders* ("Statistik uden grænser").

The external trade figures are published in the following way:

Publication	Frequency	Extent
NYT (NEWS) from Statistics Denmark	Monthly	Summary tables
Statistical News	Monthly	Detailed distribution among countries 2-digit commodity grouping Unit value and quantity indices

Statistics Service	Quarterly	Detailed figures by commodity-country
Denmark's Imports and Exports of goods	Annually	All countries, 2-digit SITC, total figures on 5-digit SITC
Statistical Yearbook	Annually	Approx. as in Statistical News
Statistical Ten-Year Review	Annually	Summary tables (also index)
Main Indicators	Monthly	Slightly more detailed than in NYT
StatBank Denmark	Monthly	Detailed figures by commodity-country
Statistics across Borders	Annually	Summary tables

Access to data can be obtained in accordance with Statistics Denmark's standard terms for the relevant products.

Furthermore, data can be supplied by taking out a special subscription where subscribers receive selected data according to their requirements.

5.2 Basic material: Storage and usability

In addition to the statistical material, cf. section 1.2, the basic material contains a range of identifier information (e.g. VAT registration no. ("SE-no.)) and a distribution by nature of transaction.

Particularly identifier information is well suited for linking data with other business statistics.

5.3 Documentation

At the homepage of external trade (www.dst.dk/udenrigshandel) most documentation can be found.

The procedure used in compiling the external trade statistics is described in the text section of the annual publication.

The INTRASTAT system is described in: *Guide to INTRASTAT for 2003 ("Vejledning til INTRASTAT for 2003")*.

The quality of the figures is analysed in the paper: *The Quality of the External Trade Figures*.

The principles for compiling external trade statistics are laid down in the UN international guidelines: *International Merchandise Trade Statistics, Concepts and Definitions*, Statistical Papers, Series M no. 52, rev. 2 (United Nations, New York 1998). Also available in a Danish translation with comments, Danmarks Statistik: *Metodemanual for udenrigshandelsstatistik* (Copenhagen 1999).

5.4 Other Information

The Danish external trade figures are accessible via various international publications, e.g from the OECD, the UN, the IMF and Eurostat, including Eurostat's COMEXT-database.

6. Supplementary documentation

No supplementary documentation is available

Trade with non-EU countries

This declaration was transferred to the Internet on 1 March 2005

0 Administrative Information about the Statistical Product

0.1 Name

Trade with non-EU countries

0.2 Subject Area

External trade

0.3 Responsible Authority, Office, Person, etc.

External trade

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0.4 Purpose and History

The statistics analyse the development in Denmark's trade in goods at a detailed commodity level (imports and exports) with non-EU-countries (3rd countries). The statistics have been compiled regularly since 1838. Before the introduction of the EC Single Market 1 January 1993, the statistical system also covered trade in goods with Member States of the European Union.

0.5 Users and Application

Public authorities, private organisations, firms, the news media, and private individuals. The detailed figures for the commodity-country distribution are used by trade and industry for market analyses.

0.6 Sources

Customs and shipping documents (the Single Administrative Document) which are prepared in connection with imports and/or exports of all goods from/to countries outside the European Union.

0.7 Legal Authority to Collect Data

Council Regulation (EEC) No 1172/95 of 22 May 1995 concerning statistics relating to the exchange of goods by the Community and its Member States with non-member countries with later amendments and addenda, Act on Statistics Denmark, and Consolidated Act No 1495 of 15 December 2004 of the Ministry of Economic and Business Affairs.

0.8 Response burden

There is no response burden, as the statistics are based on customs and shipping documents.

0.9 EU Regulation

Council Regulation (EEC) No 1172/95 of 22 May 1995 on statistics relating to the exchange of goods by the Community and its Member States with non-member countries with later amendments and addenda.

1 Contents

1.1 Description of Contents

The statistics show Denmark's imports and exports of goods from/to non-European Union countries. The statistics are distributed among partner countries (country of origin/country of consignment for imports, country of destination for exports) and approx. 10,500 different goods recorded by value, net weight in kilograms, and any supplementary unit (e.g. litres, units, or square metres). Furthermore, quarterly unit value and volume indices are published at a more aggregated level (SITC-chapters, but not distributed among partner countries). In addition, the external trade statistics for Greenland are published.

1.2 Statistical Concepts

The statistics are prepared on the basis of reports to the Central Customs and Tax Administration ("Told og Skat") in connection with imports and exports of goods to/from Denmark from/to non-European Union countries. All transactions in the imports must be declared while it is not mandatory to report transactions below the statistical threshold in the exports. Missing trade on the exports amount to less than 2 per cent of total 3rd country export and is estimated making the statistics complete. In the imports small transactions under the statistical threshold (DKK 7,500 and 1,000 kg for exports to Greenland and the Faroe Islands, the statistical threshold is DKK 3,000 and 1,000 kg) can be declared using a simplified declaration.

The external trade statistics for Greenland are prepared on the basis of the Danish figures for imports and exports from/to Greenland plus a supplement in the form of data collected by the Home Rule (local government) customs function.

For each commodity transaction (imports or exports) the following information, which is used in the external trade statistics, is collected:

- Product code in accordance with the Combined Nomenclature CN or TARIC (only imports)
- Partner country (country of origin/country of consignment for imports, country of destination for exports)
- Procedure code
- Statistical value in Danish kroner (whole numbers) (cif for imports and fob for exports)
- Net weight in kilos (whole numbers)
- Any supplementary unit, e.g. litres, units (if indicated in CN)
- The mode of transport at the border

Furthermore, a wide range of information is gathered which is primarily used for fiscal purposes.

The statistics are published at the most detailed level as sums of statistical value, net weight, and any supplementary unit for identical occurrences of product code and partner country transactions allocated to certain procedure codes (e.g. goods to/from repair and movements of goods between different stocks) are, however, indicated separately. Furthermore, quarterly unit value and volume indices are published at a more aggregated level (SITC-chapters, but not distributed among partner countries) -

however, this does not apply to the external trade statistics for Greenland.

For each flow of goods (imports or exports), the groupings are primarily allocated on the basis of commodity groups (e.g. all goods for which the first two digits are identical, i.e. the chapter level). Different commodity nomenclatures are used for the grouping (KN, SITC rev. 3, BEC and KONJ). Furthermore, figures are recorded for various groups of countries (EFTA, OECD, etc.)

2 Time

2.1 Reference Period

The month in which the commodity is released by the Central Customs and Tax Administration for imports or exports from/to a non-European Union country.

2.2 Date of Publication

The statistics are published monthly. The external trade statistics for Greenland are, however, only published quarterly.

Published about 6-7 weeks after the expiry of the reference month in NYT (NEWS) and Statbank Denmark. The external trade statistics for Greenland are only published quarterly in the series Statistical News.

2.3 Punctuality

The statistics are usually published without delay in relation to the scheduled date, which is announced at least 3 months in advance at Statistics Denmark's homepage.

2.4 Frequency

Published monthly. The external trade statistics for Greenland are published quarterly.

3 Accuracy

3.1 Overall accuracy

The first publications of the external trade figures are subject to some uncertainty, as the number of imperfect items are so high that they cannot be included at the time of publication. Compensation for this is made by estimation. The reliability of figures for a given month is greatly increased by later publications. The final figures can be described as very reliable, both in terms of totals and at the detailed level.

3.2 Sources of inaccuracy

The final total figures can be considered to be of almost optimum quality.

At the detailed level, the reliability of the figures is affected by:

- The verbal reported trade below the statistical threshold in exports are based on estimation
- Commodity distribution of transactions below the statistical threshold must be carried out by estimation.
- A certain bias suggesting that the import figures are of higher quality than the export figures is likely as import transactions are subject to extensive control measures compared to export transactions.

3.3 Measures on accuracy

There are no figures for the uncertainty at the total level. However, the commodity distribution of transactions below the statistical threshold is presumably slightly imprecise. However, these items only cover approx. 2-4% of the total trade with non-European Union countries.

4 Comparability

4.1 Comparability over Time

Any gap in the time series as a result of changed collection methods etc. is adjusted for by estimation, which is the reason why the external trade figures are comparable over time.

It goes without saying that data comparability does not apply at the most detailed commodity level as the content of many product codes is changed over time.

4.2 Comparability with other Statistics

The external trade figures are comparable with several other sources:

- The partner country's recording of the same transaction (the mirror transaction). The comparison is hampered by differences in the level of value for the recording of imports and exports (cif and fob, respectively).
- For the exports of industrial products with figures from the industrial statistics' recording of turnover in export markets. The comparison is made difficult by the fact that the industrial statistics' records are not distributed by country.

A quality report for external trade statistics are made. The latest report can be found on the homepage of external trade www.dst.dk/udenrigshandelstal. The report is in Danish.

4.3 Coherence between provisional and final statistics

A number of reports are faulty to such a degree that they cannot be included directly in the external trade statistics. If the error seems to be in value or quantity imputation is performed.

The inaccuracy on the provisional statistics can be illustrated by the difference between the first provisional statistics and the revised figures. Information on these revisions are presented in the table below for the latest final statistics - 2003.

Revisions (Mill. DKK), 2003

	Numeric	Actual	Numeric	Actual
	--- Mill. DKK ---		-Percent	latest-
Imports				
- INTRASTAT	26,636	-12,555	10.4	-4.9
- EXTRASTAT	2,552	-55	2.4	-0.1
- I alt	29,188	-12,611	8.1	-3.5
Exports				
- INTRASTAT	29,234	-16,945	10.5	-6.1
- EXTRASTAT	6,351	2,772	4.3	1.9
- I alt	35,585	-14,173	8.3	-3.3
Trade balance				
- INTRASTAT		-4,390		-19.7
- EXTRASTAT		2,828		6.6
- I alt		-1,562		-2.4

5 Accessibility

5.1 Forms of dissemination

The statistics are published in *Nyt fra Danmarks Statistik* (News from Statistics Denmark) (monthly), in the series *Statistiske Efterretninger* (Statistical News) (monthly), in the series *Statistikservice* (Statistics Service) (quarterly), in *Konjunkturstatistik* (Main Indicators) (monthly) and in StatBank Denmark (monthly).

Annual publications: *Statistical Yearbook*, *Statistical Ten-Year Review*, *Denmark's Imports and Exports of Goods ("Danmarks vareimport og eksport")* and *Statistics across Borders ("Statistik uden grænser")*.

The external trade figures are published in the following way:

Publication	Frequency	Extent
NYT (NEWS) from Statistics Denmark	Monthly	Summary tables
<i>Statistical News</i>	Monthly	Detailed distribution among countries 2-digit commodity grouping Unit value and quantity indices
<i>Statistics Service</i>	Quarterly	Detailed figures by commodity-country
<i>Denmark's Imports and Exports of goods</i>	Annually	All countries, 2-digit SITC, total figures on 5-digit SITC
<i>Statistical Yearbook</i>	Annually	Approx. as in <i>Statistical News</i>
<i>Statistical Ten-Year Review</i>	Annually	Summary tables (also index)
<i>Main Indicators</i>	Monthly	Slightly more detailed than in NYT
<i>StatBank Denmark</i>	Monthly	Detailed figures by commodity-country
<i>Statistics across Borders</i>	Annually	Summary tables

Access to data can be obtained in accordance with Statistics Denmark's standard terms for the relevant products.

Furthermore, data can be supplied by taking out a special subscription where subscribers receive selected data according to their requirements.

5.2 Basic material: Storage and usability

In addition to the statistical material, cf. section 1.2, the basic material contains a range of identifier information (e.g. VAT registration no. ("SE-no.)) and a distribution by procedure code, container code, etc.

Particularly identifier information is well suited for linking data with other economic statistics.

5.3 Documentation

At the homepage of external trade (www.dst.dk/udenrigshandel) most documentation can be found.

The procedure used in compiling the external trade statistics is described in the text section of the annual publication.

The quality of the figures is analysed in the paper: *The Quality of the External Trade Figures* ("Kvaliteten af udenrigshandelstallene").

The principles for compiling external trade statistics are laid down in the UN international guidelines:

International Merchandise Trade Statistics, Concepts and Definitions, Statistical Papers, Series M no. 52, rev. 2 (United Nations, New York 1998). Also available in a Danish translation with comments, Danmarks Statistik: *Metodemanual for udenrigshandelsstatistik* (Copenhagen 1999).

5.4 Other Information

The Danish external trade figures are accessible via various international publications, e.g. from the OECD, the UN, the IMF and Eurostat, including Eurostat's COMEXT-database.

6. Supplementary documentation

No supplementary documentation is available

11.3 Statistical surveys and other data sources used for the transition from GDP to GNI

The main data source used for the transition from GDP to GNI is the rest of the world account, which in Denmark is consistent with the balance of payments statistics.

Balance of payments

0 Administrative Information about the Statistical Product

0.1 Name

Balance of payments

0.2 Subject Area

National accounts and balance of payments

0.3 Responsible Authority, Office, Person, etc.

Balance of payments

Poul Uffe Dam, tel.: +45 39 17 34 91, e-mail: pud@dst.dk

Jytte Jeppesen, tel.: +45 39 17 34 92, e-mail: jjj@dst.dk

0.4 Purpose and History

The balance of payments describes the economic movements across the national border. The balance of payments for Denmark has been compiled since 1934.

Today the main emphasis is placed upon income and expenditures in relation to foreign countries. Originally the most important item was the foreign debt, which is compiled as part of the International Investment Position (IIP). Since 1991 the IIP has been compiled by Danmarks Nationalbank.

0.5 Users and Application

Traditionally, the balance of payments statistics form part of the most important background information in the planning of the economic policy of the country. Thus, one important user is the Ministry of Finance.

The balance of payments statistics is used in the compilation of the national accounts.

The balance of payments statistics constitutes Denmark's contribution to the compilation of the EU Balance of payments.

0.6 Sources

The statistics are prepared on the basis of the foreign trade statistics, cf. *Trade with the rest of the world, EU trade(Intrastat)*, and the settlements statistics of Danmarks Nationalbank (the Danish central bank). Supplementary information from public authorities and business enterprises is used cf. *General Government Finances and Account Statistics for shipping*. Some of the sources are used as they stand while others are used as indicators of development.

0.7 Legal Authority to Collect Data

Not relevant for these statistics.

0.8 Response burden

The direct response burden is nil as all information is collected through other statistics, cf. 0.6.

0.9 EU Regulation

The rest of the world account of the national accounts, which is derived from the balance of payments, is prepared in accordance with Council Regulation (EC) No 2223/96 of 25 June 1996 on the European system of national and regional accounts in the Community (ENS95)(OJ L 310 30.11.96, p.1).

1 Contents

1.1 Description of Contents

The balance of payments records the value of the economic transactions which are made within a given period between the Danish balance of payments area and the rest of the world.

1.2 Statistical Concepts

The balance of payments can be divided into three main accounts: the current account showing income and expenditure, the capital account and the financial account showing how a deficit/surplus on current account is financed/spent or transactions within these two accounts. The following main items are entered under current account: *goods, services, income and current transfers*.

The most frequently used statistical measure is the current account balance.

Compiling the Danish balance of payments has from 1949 been adapted to the form used by the IMF with the limitations imposed by the primary statistical material. In 1998, the compilation was adapted to the IMF balance of payments manual from 1993 (the fifth manual).

The balance of payments is compiled according to the double-entry system. Every transaction involves both a credit entry and a debit entry. The employment of this principle implies that the balance of payments, i.e. all three main accounts taken together, will always balance, any differences between the totals being attributable to statistical discrepancies, the so-called "errors and omissions".

2 Time

2.1 Reference Period

In the balance of payments statistics data are published quarterly. However, main balances are published monthly.

2.2 Date of Publication

The statistics are published approx. 40 days after the end of the reference period.

2.3 Punctuality

The balance of payments statistics are normally published without delays as to the preannounced dates.

2.4 Frequency

Information about the balance of payments is published monthly.

3 Accuracy

3.1 Overall accuracy

The calculation of the balance of payments is mainly based on the settlements statistics from Danmarks nationalbank (the Danish Central Bank) and the foreign trade statistics.

The settlements statistics consist of a total count of payments to/from the rest of the world based on reports submitted by banks etc. For payments above a certain threshold, purpose and partner country are recorded. The payments are recorded at the time of payment and for goods alone also after the time of transaction. Thus both pre-payments and deferred payments are included in the monthly statistics.

For trade with other European Union Member States (the intra-EU trade), the foreign trade statistics are based on questionnaires filled in by Danish companies whose annual trade with foreign countries exceeds specific threshold values. Adjustment for this is made for companies whose trade is below these threshold as well as, among other things, for erroneous reports. Trade with countries outside the European Union (the extra-EU trade) is based on a total count of all trade on the basis of customs data.

On the basis of information from other statistics, for instance the annual accounts statistics of the shipping trade and of international cooperation (EU, developing countries etc.), revisions are made to the balance of payments statistics, cf. 0.6.

3.2 Sources of inaccuracy

The uncertainty in respect of the calculation of Denmark's balance of payments has increased after the introduction of the Single Market in the European Union in 1993, cf. 3.1 on foreign trade statistics. The uncertainty has, among other things, been associated with an increasing, but unstable difference between the total payments for goods according to Danmarks Nationalbank's settlements statistics and the values in the foreign trade statistics. This problem has since 1999 been thoroughly investigated at the most detailed level, leading to an improvement of quality of both statistics.

3.3 Measures on accuracy

Are not calculated.

4 Comparability

4.1 Comparability over Time

Actual balance of payments statements have been prepared since 1934. From 1949 the statements have been adapted to the form used by the IMF with the limitations imposed by the primary statistical material. Up to 1997 there are very long series for the main items without any noticeable breaks.

In 1998, the compilation was adapted to the IMF balance of payments manual from 1993 (the fifth manual). Back data to 1988 for the most important items are available.

Breaks:

- The treatment of interest payment related to financial derivatives has been adapted according to new international guidelines as from the year 1997. This implies modest changes for investment income, net, but considerable changes for the gross amounts.
- A major investigation of available sources for the main item *services* has resulted in a considerable increase of both imports and exports of services as from the year 1999, the current account balance remaining unchanged. This change of level was mainly related to the item other services, which subsequently was published in four subitems. This change of level amounts to around DKK 30 bn. It has been made possible by more detailed information provided by the settlements statistics, cf. 3.1.

4.2 Comparability with other Statistics

The balance of payments statistics are compiled according to the standards outlined in the IMF Balance of Payments Manual, fifth edition, 1993, cf. 4.1.

Imports in the foreign trade statistics are calculated cif, while they are calculated fob in the balance of payments by deducting freight and insurance charges. But otherwise *goods* in the balance of payments statistics are delimited slightly differently than in the foreign trade statistics due to different definitions.

4.3 Coherence between provisional and final statistics

After the first publication of the balance of payments, it is continuously adjusted, as supplementary or adjusted statistical material appears. This supplementary information means that the final calculation of the balance of payments is only prepared about 2-3 years after the expiry of the reference year.

In order to evaluate the reliability of the preliminary figures, the first release of the current account balance of a quarter is compared with the latest available release of the said quarter. A comparison by December 2005 for the period 2000 Q1 - 2004 Q4 shows a bias in the first compilation of DKK -0.7 bn and an average deviation of DKK 2.2 bn. These figures shall be related to a current account total quarterly income of about DKK 200 bn.

5 Accessibility

5.1 Forms of dissemination

Current publications: *News from Statistics Denmark, National Accounts and Balance of Payments (Statistical News)* ("*Nationalregnskab og betalingsbalance*") and *Statistics Denmark's databank*.

Annual publications: *Statistical Yearbook* and *Statistical 10-year Review*.

5.2 Basic material: Storage and usability

No particular storing of basic data is conducted, cf. 0.6.

5.3 Documentation

Summary information on the preparation of the balance of payments is given in connection with the publication of the balance of payments. A comprehensive documentation is provided by the European Central Bank (<http://www.ecb.int/pub/pdf/other/bop05en.pdf>).

Older, more detailed information is found in "Methodology for Denmark's Balance of Payments", Eurostat, 1985 (sold out). The documentation is presented in Danish as well as in English and French.

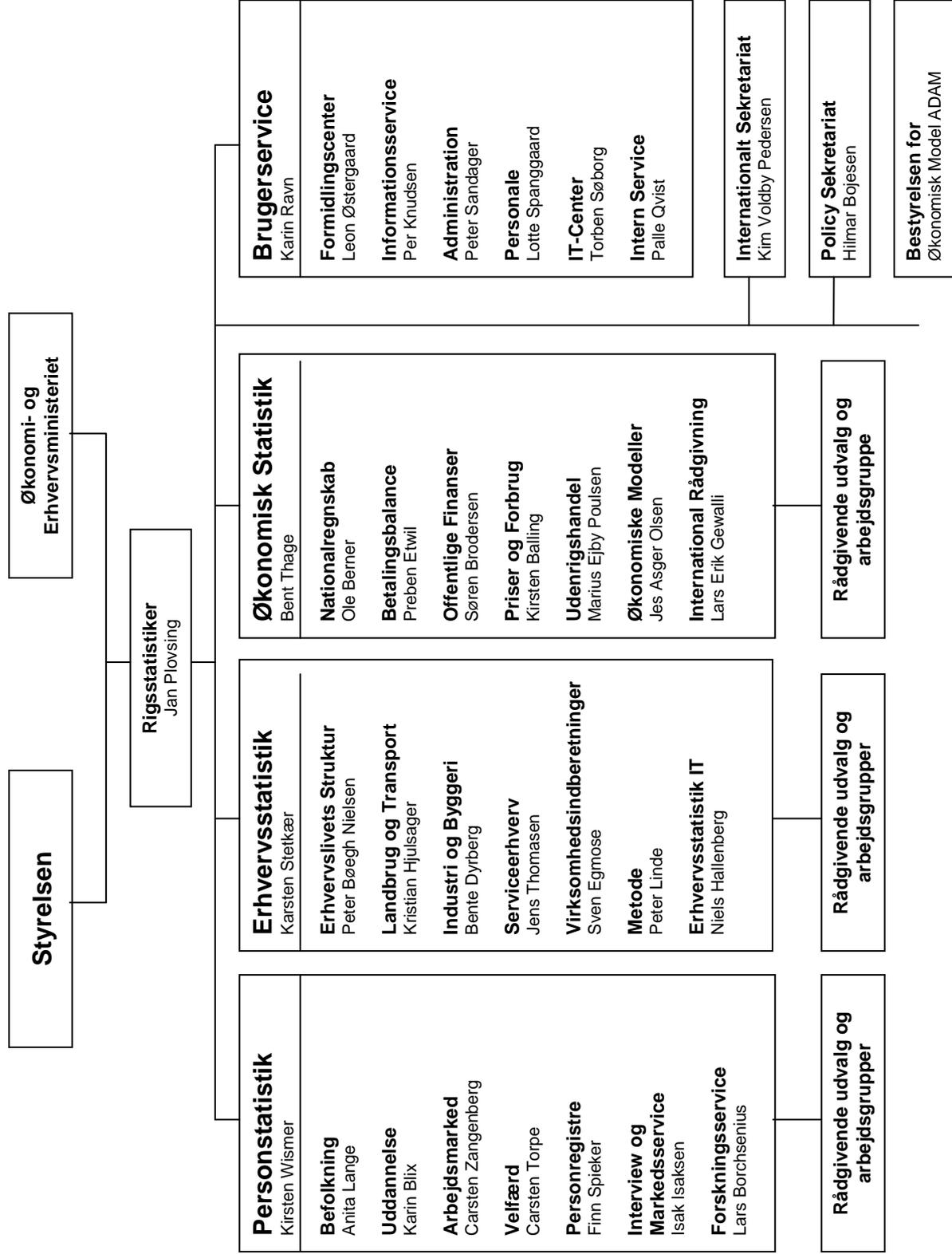
5.4 Other Information

No further published material is available.

6. Supplementary documentation

No supplementary documentation is available

Danmarks Statistiks organisation 22. marts 2006



Annex 2 Organiseringen af nationalregnskabsarbejdet i Danmarks Statistik (Organisation of economic statistics)

Økonomisk Statistik. Ressourcer og lovgivning pr. 1. januar 2006

	Årsværk 2006	EU- lovgiv- ning ¹	Dansk lovgiv- ning ¹	Finan- sierings- tilskud ²
Økonomisk Statistik i alt	130,9			
216. Afdelingsdirektøren (INFRA)	2,3			
216 Afdelingsdirektøren	1,3			
216 International rådgivning	1,0			
06. Nationalregnskab (STATISTIK)	24,7			
061. Årligt nationalregnskab	12,9	ja		ja
062. Kvartalsvis nationalregnskab	4,8	ja		
064. "Grønt nationalregnskab" og input-output	3,9	ja		ja
065. Kapitalapparat og formuer	3,1	ja		
24. Betalingsbalance (STATISTIK)	11,7			
241. Betalingsbalance	11,7	ja		
05. Offentlige Finanser (STATISTIK)	31,9			
051. Offentlige finanser generelt	17,8	ja		ja
052. Kommunale regnskaber og budgetter	3,6	ja		ja
053. Regnskaber for offentlige virksomheder	3,0	ja		
054. Kreditmarked	2,0	ja		
055. Finansielle konti og FISIM	4,5	ja		
056. EU's egne indtægter	1,0	ja		ja
12. Priser og Forbrug (STATISTIK)	18,5			
121. Prisstatisik	14,9	ja	ja	ja
122. Ejendomssalg og tvangsauktioner	0,4			ja
123. Forbrugsundersøgelsen	3,2	ja		
02. Udenrigshandel (STATISTIK)	22,5			
021. Udenrigshandel	22,5	ja		ja
20. Økonomiske Modeller (STATISTIK)	8,0			
201. ADAM-modellen	7,0		ja	ja
202. Miljømodeller (EMMA mv.)	1,0			
19. International Rådgivning (IDV)	7,2			
191. Egne medarbejdere	3,5			
192. Indlån fra andre kontorer	3,7			
33. Kundecenter 3 (IDV)	4,1			
331. Serviceopgaver udført af 6. kt.	0,3			
332. Serviceopgaver udført af 5. kt.	0,3			
333. Serviceopgaver udført af 12. kt.	1,5			
334. Serviceopgaver udført af 2. kt.	1,4			
335. Serviceopgaver udført af 20. kt.	0,6			
336. Serviceopgaver udført af 24. kt.	0,0			

Anm. STATISTIK = Statistikprogrammet. IDV = Indtægtsdækket virksomhed. De anførte årsværk vedrørende IDV er kun de direkte udførende årsværk. INFRA = Infrastruktur.

¹ Se specifikationen i bilag 2, Arbejdsplan 2006. ² Se specifikationen i bilag 3, Arbejdsplan 2006.

Annex 3: Industrial Accounts Statistics Questionnaire

Regnskabsstatistik

Tællingsår Tællingsnr.
2003 5640-00

Regnskabsår: Virksomheder med forskudt regnskabsår udfylder på grundlag af dette. Det skal i så fald være det regnskab, hvor regnskabsafslutningen ligger mellem 1. maj 2003 og 30. april 2004. De anførte oplysninger vedrører: (Sæt kryds)

Kalenderåret 2003

Anden regnskabsperiode. Angiv hvilken: Fra til

Resultatopgørelse

Ordinær drift før finansielle og ekstraordinære poster		1.000 kr.
1a. Omsætning. Beløbet opgøres efter fradrag af prisnedslag, merværdi- og punktafgifter.....	1a	
1b. Arbejde udført for egen regning og opført under aktiver	1b	
2. Andre driftsindtægter. Her anføres kun indtægter af sekundær karakter.....	2	
3. Forøgelse (+) / formindskelse (-) af lagre (råvarer, færdigvarer mv.).....	3	
4. Køb af råvarer, hjælpematerialer, færdigvarer og emballage (ekskl. køb af energi, jf. punkt 5).....	4	
5. Køb af energi (til opvarmning og produktion, undtagen brændstof til registrerede motorkøretøjer).....	5	
6. Køb af lønarbejde og underentrepriser (kun ikke-ansatte)	6	
7. Omkostninger til husleje (ekskl. varme. Omfatter kun udgifter i lejeforhold).....	7	
8. Omkostninger til anskaffelse af småinventar/driftsmidler med kort levetid	8	
9. Omkostninger til leje af arbejdskraft fra andet firma (fx vikarbureau)	9	
10. Omkostninger til langtidslige og operationel leasing	10	
11. Eksterne omkostninger i øvrigt (bortset fra poster af sekundær karakter)	11	
12. Ordinære tab på debitorer (konstaterede tab samt ændring i hensættelse til inødegåelse af tab)	12	
13. Lønninger og gager (refusioner fratrækkes ikke, men anføres under punkt 2)	13	
14. Pensionsomkostninger	14	
15. Andre omkostninger til social sikring	15	
16. Afskrivninger og nedskrivninger af materielle og immaterielle anlægsaktiver	16	
17. Nedskrivning af omsætningsaktiver i det omfang de overstiger normale nedskrivninger	17	
18. Sekundære omkostninger	18	
19. <i>Resultat før finansielle og ekstraordinære poster</i>	19	
Finansielle poster		
20. Indtægter af kapitalandele, jf. punkt 39. Negative beløb bedes anført under pkt. 23	20	
21. Udbytte i øvrigt af finansielle anlægsaktiver, jf. punkt 39.....	21	
22. Renteindtægter o.l. af finansielle anlægsaktiver, jf. punkt 38 og 40.....	22	
23. Renteindtægter o.l. af omsætningsaktiver, jf. punkt 49-55	23	
24. Nedskrivning af finansielle anlægs- og omsætningsaktiver	24	
25. Renteomkostninger o.l.	25	
Ekstraordinære poster		
26. Ekstraordinære indtægter	26	
27. Ekstraordinære omkostninger	27	
28. <i>Årets resultat, før skat af ordinært og ekstraord. resultat</i>	28	
Skatter		
29. Selskabsskat mv. af ordinært og ekstraordinært resultat (udfyldes ikke for personligt ejede firmaer)	29	
30. Årets resultat	30	
Resultatanvendelse		
31. Konsolidering, dvs. overførsel til (+) eller fra (-) egenkapitalen	31	
32. Udbytte (udbetalt eller deklareret), udbetaling til indehavere, efterbetaling til andelshavere og anden udlodning.....	32	

Balance

Aktiver		1.000 kr.	
Anlægsaktiver			
33. <i>Immaterielle anlægsaktiver i alt (herunder software)</i>	33		
<i>Materielle anlægsaktiver</i>			
34. Grunde og bygninger	34		
35. Produktionsanlæg og maskiner	35		
36. Andre anlæg, driftsmateriel og inventar	36		
37. Materielle anlægsaktiver under udførelse og forudbetalinger for materielle anlægsaktiver	37		
38. <i>Materielle anlægsaktiver i alt</i>	38		
<i>Finansielle anlægsaktiver</i>			
39. Tilgodehavender	39		
40. Beholdning af aktier og ejerandelsbeviser	40		
41. Beholdning af obligationer og andre værdipapirer	41		
42. <i>Finansielle anlægsaktiver i alt</i>	42		
43. Anlægsaktiver i alt (33+38+42)	43		
Omsætningsaktiver		Primo 1.000 kr	Ultimo 1.000 kr
<i>Varebeholdninger</i>			
44. Råvarer, hjælpematerialer, brændsel og emballage	44		
45. Varer under fremstilling	45		
46. Egenfremstillede færdigvarer til videresalg	46		
47. Købte varer til videresalg	47		
48. Forudbetalinger på købte varer	48		
49. <i>Varebeholdninger i alt</i>	49		
<i>Tilgodehavender</i>			
50. Tilgodehavender fra salg af varer og tjenesteydelser	50		
51. Igangværende arbejder for fremmed regning	51		
52. Andre tilgodehavender (inkl. periodeafgrænsningsposter)	52		
53. <i>Tilgodehavender i alt</i>	53		
<i>Værdipapirer, kapitalandele og likvide beholdninger</i>			
54. Beholdning af aktier og ejerandelsbeviser	54		
55. Beholdning af obligationer og andre værdipapirer	55		
56. Likvide beholdninger	56		
57. <i>Værdipapirer, kapitalandele og likvide beholdninger i alt</i>	57		
58. Omsætningsaktiver i alt (49+53+57)	58		
59. Aktiver i alt (43+58)	59		
Passiver			
60. Egenkapital ultimo	60		
61. Hensatte forpligtelser	61		
62. Langfristet gæld til leverandører	62		
63. Anden langfristet gæld	63		
64. Kortfristet gæld til leverandører	64		
65. Anden kortfristet gæld	65		
66. Passiver i alt	66		

Investeringer

Investeringer omfatter alene aktiver, der er bestemt til firmaets vedvarende eje eller brug.

Køb af byggegrunde eller opførelsesudgifter til nybygninger, der er bestemt til videresalg, skal derfor **ikke** medtages. Moms samt småinventar/driftsmidler, der straks udgiftsføres i resultatopgørelsen, medtages heller **ikke**.

Derimod medtages alle aktiverede udgifter til egenproduktion af såvel materielle som immaterielle aktiver.

Hvis der i regnskabsåret er indgået nye finansielle leasing-kontrakter, **skal** leasing-genstandenes anskaffelsessum medtages.

Regnskabsårets investeringer

Tilgang	1.000 kr.
Under tilgang anføres den bogførte værdi før bogføringsmæssige og finansielle reguleringer, fx forskudsafskrivninger, kurstab og offentlige tilskud.	
67. <i>Immaterielle anlægsaktiver (herunder software)</i>	67
<i>Fast ejendom</i>	
68. Køb af eksisterende bygninger (inkl. grundværdi)	68
69. Opførelsesudgifter for nybygninger (ekskl. grunde)	69
70. Køb af ubebyggede grunde	70
71. Ombygning og forbedring af bygninger og bygningsinstallationer, herunder opvarmnings- og ventilationsanlæg	71
72. Veje, havne, pladser o.l. Køb af eksisterende anlæg, nyanlæg samt ombygninger, herunder grundforbedring, byggemodning mv.	72
73. <i>Fast ejendom i alt</i>	73
<i>Driftsmidler</i>	
74. Produktionsanlæg og maskiner	74
75. Andre anlæg, driftsmateriel og inventar	75
76. <i>Driftsmidler i alt</i>	76
77. Materielle anlægsaktiver under udførelse og forudbetalinger for materielle anlægsaktiver	77
78. Tilgang i alt (67+73+76+77)	78
78a Heraf investering i udstyr og anlæg til foreningsbekæmpelse (navnlig end-of-line udstyr) (<i>spørgsmål 78a skal kun besvares af industrifirmaer</i>)	78a
Afgang	
Under afgang anføres de afhændede aktivers salgspris . For afhændede bygninger og grunde anføres De beløbet omregnet til kontantværdi. Hvis De ikke kender salgsprisen, kan De i stedet benytte den bogførte værdi (svarende til de afhændede aktivers anskaffelsespris minus de akkumulerede afskrivninger på disse).	
79. <i>Immaterielle anlægsaktiver (herunder software)</i>	79
<i>Fast ejendom</i>	
80. Salg af bygninger (inkl. grundværdi)	80
81. Salg af ubebyggede grunde.....	81
82. Salg af veje, havne, pladser o.l.....	82
83. <i>Fast ejendom i alt</i>	83
<i>Driftsmidler</i>	
84. Salg af produktionsanlæg og maskiner	84
85. Salg af andre anlæg, driftsmateriel og inventar	85
86. <i>Driftsmidler i alt</i>	86
87. Afgang i alt (79+83+86)	87

Annex 4: Tax Accounts for Corporations



Selskaber Virksomhedsskema

Selskabs navn og adresse

Moderelskabets CVR-/SE-nummer	Virksomhedens CVR-/SE-nummer
Regnskabsperiode	Aktuel regnskabsperiode
	. . . /
Omfatter regnskab flere brancher	
Sauf x	
Branche	

Forslag til ny branche	1019
Forbeholdt skatteforvaltningen	

Resultatopgørelse			Balance			
	Felt nr.	Beløb kr.		Felt nr.	Beløb kr.	
Regnskabsmæssige oplysninger	Nettoomsætning	+ 2100	Aktiver	Anlægsaktiver	+ 2520	
	Vareforbrug	- 2205		Varebeholdning	+ 2553	
	Produktionsløn	- 2210		Igangværende arbejder	+ 2554	
	Andre stykomkostninger	- 2240		Tilgodehavender for salg og tjenesteydelser	+ 2565	
	Øvrig løn, gage m.m.	- 2300		Øvrige omsætningsaktiver	+ 2585	
	Øvrige omkostninger	- 2370		Passiver	Leverandører af varer og tjenesteydelser	- 2600
	Driftsøkonomiske afskrivninger	- 2380			Kortfristet gæld i øvrigt	- 2605
	Sekundære og ekstraordinære indtægter	+ 2400			Langfristet gæld	- 2612
	Sekundære og ekstraordinære udgifter	- 2405			Hensættelser	- 2625
	Finansieringsindtægter	+ 2430			Egenkapital ultimo (fortegn)	2799
	Finansieringsudgifter	- 2435				
	Skatter (fortegn)	2460		Skattemæssige korrektioner	Skattemæssige værdier af anlægsaktiver	+ 3886
	Driftsøkonomisk resultat (fortegn)	2499				3
Skattemæssige korrektioner	Driftsøkonomiske afskrivninger og skatter tilbageført (fortegn)	+ 2880		Korrektioner:		
		2460		Skriv de 3 sidste cifre til det felt, der korrigeres, samt beløb med fortegn	3	
	Skattemæssige afskrivninger	- 3870			3	
	Skattemæssigt underskud fra tidligere år	- 3840			3	
		3				
	Korrektioner:					
	Skriv de 3 sidste cifre til det felt, der korrigeres, samt beløb med fortegn	3				
		3				
		3				
	Skattemæssigt resultat (fortegn)	3499				

2004.01 (efl. nr. 5 509)

05.017

Skemapligten

Ved bekendtgørelse nr. 971 af 18. december 1986 indførtes pligt for personlige erhvervsdrivende og selskaber m.fl. til at indgive standardiserede regnskabsoplysninger til skattemyndighederne.

Skemapligten omfang for indkomståret, der er uændret i forhold til tidligere indkomstår, er fastlagt i Skatteministeriets bekendtgørelse nr. 1068 af 17. december 1999 om skattemæssige krav til regnskabsgrundlaget og årsregnskabet (mindstekravsbekendtgørelsen).

Afgivelse af standardiserede regnskabsoplysninger

De oplysninger, der skal indberettes på virksomhedsskemaerne, skal indsendes efter en af følgende fremgangsmåder:

- Afgivelse af regnskabsoplysningerne kan ske ved udfyldelse og indsendelse af et virksomhedsskema sammen med selvangivelsen.
- Oplysninger kan indsendes som edb-udskrift på papir med angivelse af feltnumre og beløb.
- Oplysninger kan endvidere afgives på maskinelt læsbart medium (magnetbånd eller diskette). Der er udarbejdet en særlig vejledning for edb-indberetning, der kan rekvireres hos skattemyndighederne.
- Regnskabsoplysninger kan indberettes direkte til Told•Skats edb-systemer fra revisionsfirmaer mv., der er tilsluttet terminalsystemet Told•Skat-Tele.

Hvis virksomhedsskemaet indsendes via edb-medie, er det ikke nødvendigt at indsende de pågældende virksomhedsskemaer på papir til den kommunale skatteforvaltning.

Fristen for indsendelse af oplysningerne på virksomhedsskemaer er den samme som for selvangivelsen.

Skattetillæg

I henhold til skattekontrollovens § 5, kan skattemyndighederne pålægge den skemapligtige et skattetillæg, hvis virksomhedsskemaet ikke er modtaget inden fristens udløb, eller hvis det indsendte virksomhedsskema er væsentligt fejludfyldt.

Regnskabsaflæggelse

Skemaet er opbygget over princippet om driftsøkonomisk regnskab, der korrigeres til det skattemæssige regnskab, og udfyldes som anført nedenfor.

Udfyldelse af skemaet med regnskabsmæssige værdier
Opgørelse af

- regnskabsmæssige oplysninger
 - aktiver og passiver
- udfyldes med regnskabets poster.

Felt 2499, Driftsøkonomisk resultat, og felt 2799, Egenkapital ultimo, skal stemme med regnskabets udvisende.

Udfyldelse af skemaet med skattemæssige korrektioner
Først tilbageføres de driftsøkonomiske afskrivninger og skatter i resultatopgørelsen.

Dernæst anføres de skattemæssige afskrivninger, evt. underskud fra tidligere år, samt de øvrige skattemæssige dispositioner.

I felterne (3_ _ _) anføres de fornødne korrektioner til resultatopgørelsens øvrige poster ved anvendelse af de tre sidste cifre i de felter, der skal korrigeres.

Beløbet, der anføres som korrektion, er differensen mellem den driftsøkonomiske værdi og den skattemæssige værdi.

Der anføres fortegn i beløbsfeltet. Et - (minus) nedsætter det skattepligtige resultat. Et + (plus) forøger det skattemæssige resultat.

De skattemæssige korrektioner til balancen indeholder skattemæssige værdier af anlægsaktiver, og evt. korrektioner til balancens øvrige poster ved anvendelse af de tre sidste cifre i de felter, der skal korrigeres.

I felterne (3_ _ _) anføres som korrektion, differensen mellem den driftsøkonomiske værdi og den skattemæssige værdi.

Der anføres fortegn i beløbsfeltet. Et - (minus) nedsætter aktivposten/forøger passivposten mens et + (plus) forøger aktivposten/nedsætter passivposten.

Hvis der korrigeres flere end fire felter, kan yderligere korrektioner skrives på et bilag, der hæftes på skemaet.

Fortegn

For at lette udfyldelsen af virksomhedsskemaet er der foran feltnummeret fortrykt fortegn, og for disse felter anføres intet fortegn i beløbsfeltet.

For beløb i felter, hvor der står "(fortegn)", anføres altid fortegn foran beløbet.

For følgende fortrykte felter benyttes altid fortegn:

- felt 2460, Skatter
- felt 2499, Driftsøkonomisk resultat
- felt 3499, Skattemæssigt resultat
- felt 2799, Egenkapital ultimo

For korrektionsfelter (3_ _ _) benyttes altid fortegn.

Hvis der i et felt med fortrykt fortegn skal anføres et beløb med modsat fortegn, anføres altid - (minus).

Ændringer til indkomståret 1997 og fremover

De skattemæssige korrektioner til balancen skal nu anføres i en særskilt "kasse". Det tidligere felt 3799 Skattemæssig Egenkapital udgår.

Virksomhederne kan dog vælge, at undlade at tilrette edb-programmer, der danner virksomhedsskemaer, i det skattemyndighederne fortsat kan modtage skemaer med felt 3799. Felt 3799 vil blive betragtet som et "sumfelt".

Annex 5: Detailed SLS-E questionnaire, valid until 1988

Bilag
S 47

Virksomhedsskema

for indkomståret 1988

Selskaber

Myndighed
KMNR.

1 75836

Selskabets navn og adresse

Revisors navn og adresse

Selskabets SE-nummer

Moderselskabets SE-nummer

Selskabets VIRK-nummer

Omfatter regnskabet flere brancher, sæt X

Regnskabsperiode
(udfyldes ikke)

Aktuel
regnskabsperiode
(kg./md./år)

Afleveres oplysningerne på EDB-medium, sæt X

Ønskes serviceoplysninger, sæt X

Hvis henvendelse kan rettes direkte til revisor, sæt X

Produktions- og salgforeninger m.v. sæt X
(se vejledningen)

Branche

Driftsform

BS! Tallene skal se sådan ud

+ - 1 2 3 4 5 6 7 8 9 0

Anlægs- aktiver	Tilgang	Afgang	Anvendte investeringsfond og forskudsafskrivninger
Immaterielle aktiver 3900	3910		
Bygninger og installationer 3901	3911		3941
Midler 3903	3913		3943

Særlige skattemæssige specifikationer

Rep. og vedligehol- telse af bygninger	3981
Rep. og vedligehol- telse i øvrigt	3984
Skattefri rejse- og be- ordringsgodtgørelser	3982
Anlægsarbejder for egen regning	3985

Forbeholdt skattemyndighederr

1040	1041
1042	1043
1044	1045

Resultatopgørelse

2 75836

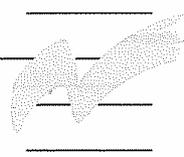
Opførelse af driftsøkonomisk resultat	Dækningsbidrag	Nettoomsætning	+ 2100	
		Stykomkostninger	Vareforbrug	- 2205
			Produktionsløn	- 2210
			Andre stykomkost.	2240
	Kapacitetsomkostninger	Administrationsløn	- 2300	
		Personaleomkostninger	- 2310	
		Reklame & marketing	- 2320	
		Tab på debitorer	- 2330	
		Sråanskaffelser	- 2335	
		Husleje og varme	- 2345	
		Kontorhold	- 2350	
		Øvrige kap.omkost.	- 2360	
		Driftsøkonomiske afskrivninger	- 2380	
		Sekundære indtægter	+ 2410	
	Sekundære udgifter	- 2415		
	Ekstraordinære indtægter	+ 2420		
	Ekstraordinære udgifter	- 2425		
	Renter	Finansieringsindtægter	+ 2430	
		Finansieringsudgifter	- 2435	
	Skatter (fortegn)	2460		
Driftsøkonomisk resultat (fortegn)	2499			
Opførelse af skattemæssigt resultat	Skattemæssig afskrivning	Driftsøkonomiske afskrivninger og skatter tilbageført (fortegn)		
		Bygninger og installationer	- 3871	
		Driftsmidler	- 3873	
	Andre	- 3875		
	Ændring værelsesnedskrivning (fortegn)	3800		
	Henlagt til investeringsfond	- 3805		
	Forskjudsafskrivning	- 3810		
	Straksfradrag (bygninger)	- 3815		
	Skattemæssigt underskud fra tidligere år	- 3810		
	Korrektions-skriv de 3 sidste cifre til det felt der kompenseres, samt beløb med fortegn.			
Skattemæssigt				

Balance

Opførelse af driftsøkonomisk egenkapital	Anlægsaktiver	Immaterielle aktiver	+ 2500
		Materielle	+ 2510
		Finansielle	+ 2530
	Omsætningsaktiver	Varebeholdning	+ 2553
		Igangværende arbejder	+ 2554
		Tilgodehavende for salg	+ 2565
		Øvrige tilgodehavender	+ 2570
		Værdipapirer	+ 2575
		Likvide beholdninger	+ 2580
		Leverandører af varer	- 2600
Gæld	Kortfristet gæld	- 2605	
	Langfristet gæld	- 2612	
Hensættelser	- 2625		
Egenkapital ultimo (fortegn)	2799		
Opførelse af skattemæssig egenkapital	Immaterielle og materielle anlægsaktiver tilbageført	-	
	Skattemæssige værdier		
	Ejendomme	+ 3881	
	Driftsmidler	+ 3883	
	Andre anlægsaktiver	+ 3885	
	Nedskrivning på værelser	- 3865	
Korrektions-skriv de 3 sidste cifre til det felt der korrigeres, samt beløb med fortegn.			
Riksmæssig egenkapital (fortegn)	3799		
Kapitalposter	Egenkapital primo (fortegn)	2700	
	Driftsøkonomisk resultat overført (fortegn)		
	Kapitaludveksler (kontant)	+ 2711	
	Kapitalindsættelser (kontant)	2716	
	Udbytte	- 2710	
	Andre kapitalindtægter	+ 2750	
Andre kapitaludgifter	- 2755		
Egenkapital ultimo	2799		

Annex 6: Questionnaire for publicly controlled non-financial corporations

DANMARKS
STATISTIK



CVR nr

Løbenr.

Regnskabsstatistik 2003

Regnskabsår

Sæt kryds:

Kalenderåret 2003

Anden regnskabsperiode. Angiv hvilken: Fra _____ til _____

Beløb er angivet i: Danske kroner Euro

Resultatopgørelse

* Poster der er kommenteret i vejledningen

Ordinær drift før finansielle og ekstraordinære poster		1 000 kr./1 000 euro
1a	Omsætning. Beløbet opgøres efter fradrag af prisnedslag, merværdi- og punktafgifter	1a
1b	Arbejde udført for egen regning og opført under aktiver*	1b
2	Tilskud fra kommuner, stat mv	2
3	Andre driftsindtægter. Her anføres kun indtægter af sekundær karakter*	3
4	Forøgelse (+) / formindskelse (-) af lagre (råvarer, færdigvarer mv)*	4
5	Køb af råvarer, hjælpematerialer, færdigvarer og emballage*	5
5a	Heraf materialer til brug ved egenproduktion af investeringsgoder*	5a
6	Køb af underrepriser og lønarbejde (kun ikke-ansatte)*	6
7	Omkostninger til husleje (ekskl. varme. Omfatter kun omkostninger i lejerforhold)	7
8	Omkostninger til anskaffelse af småinventar/drifsmidler med kort levetid*	8
9	Omkostninger til reparation og vedligeholdelse af bygninger, anlæg og maskiner mv.*	9
10	Omkostninger til vikarbureauer	10
11a	Omkostninger til langtidsløje og operationel leasing*	11a
11b	Ordinære tab på debitorer (konstaterede tab samt ændring i hensættelse til imadegøelse af tab)	11b
12	Eksterne omkostninger i øvrigt (bortset fra poster af sekundær karakter)*	12
13	Lønninger og gager (refusioner fratrækkes ikke, men anføres under punkt 3)*	13
13a	Heraf produktionsløn ved egenproduktion af investeringsgoder*	13a
14	Pensionsomkostninger*	14
15	Andre omkostninger til social sikring*	15
16	Afskrivninger og nedskrivninger af materielle og immaterielle anlægsaktiver*	16
17	Sekundære omkostninger*	17
18	Resultat før finansielle og ekstraordinære poster	18
Finansielle poster		
19	Indtægter af kapitalandele. Negative beløb bedes anført under punkt 22*	19
20	Udbytte i øvrigt af finansielle anlægsaktiver	20
21	Renteindtægter o.l. af finansielle aktiver	21
22	Nedskrivning af finansielle aktiver*	22
23	Renteomkostninger o.l.	23
Ekstraordinære poster		
24	Ekstraordinære indtægter	24
25	Ekstraordinære omkostninger	25
26	Årets resultat, før skat af ordinært og ekstraordinært resultat	26
Skatter		
27	Selskabsskat mv. af ordinært og ekstraordinært resultat (udfyldes ikke for personligt ejede firmaer)*	27
28	Årets resultat	28
Resultatanvendelse		
29	Konsolidering, dvs. overførsel til (+) eller fra (-) egenkapitalen	29
30	Udbytte (udbetalt el. deklareret), udbetaling til indehavere, efterbetaling til andelshavere o.l.	30

DSt: 1810-01 G-1.000-23.2004 DSt-Tryk

Sejrogsvej 11
2100 København Ø

Martin Fuglsang
Direkte tlf 39 17 34 54

e-post mbn@dst.dk
fax 39 17 30 59

www.dst.dk

Balance

		1 000 kr / 1 000 euro
Aktiver		
31	Immaterielle anlægsaktiver i alt (<i>herunder software</i>)*	31
	<i>Materielle anlægsaktiver</i>	
32	Grunde og bygninger*	32
33	Produktionsanlæg og maskiner (<i>der fortrinsvis benyttes i produktionen</i>)	33
34	Andre anlæg, driftsmateriel og inventar (<i>fx edb-udstyr, køretøjer og kontorinventar, der ikke direkte benyttes i produktionen</i>)	34
35	Materielle anlægsaktiver i alt	35
	<i>Værdipapirer, kapitalandele og likvide beholdninger</i>	
36	Tilgodehavender samt igangværende arbejder	36
37	Beholdninger af aktier og ejerandelsbeviser	37
38	Beholdninger af obligationer og andre værdipapirer	38
39	Likvide beholdninger	39
39a	Heraf kassebeholdning	39a
39b	Heraf indskud på anfordring	39b
40	Værdipapirer, kapitalandele og likvide beholdninger i alt	40
	<i>Varebeholdninger</i>	
41	Råvarer, hjælpematerialer, brændsel og emballage, ultimo regnskabsåret	41
42	Lagre af handels- og færdigvarer ultimo regnskabsåret	42
43	Varebeholdninger i alt	43
44	Aktiver i alt (31+35+40+43)	44
Passiver		
45	Egenkapital ultimo	45
46	Hensatte forpligtelser	46
47	Langfristet gæld til leverandører	47
48	Anden langfristet gæld*	48
48a	Heraf til stat og kommuner	48a
48b	Heraf obligationsgæld til realkreditinstitutioner	48b
49	Kortfristet gæld til leverandører	49
50	Anden kortfristet gæld*	50
50a	Heraf til stat og kommuner	50a
51	Passiver i alt	51

Regnskabsårets investeringer

Investeringer omfatter alene aktiver, der er bestemt til firmaets vedvarende eje eller brug.

Køb af byggegrunde eller opførelsesudgifter til nybygninger, der er bestemt til videresalg, bedes derfor ikke medtages. Moms samt småinventar/driftsmidler, der straks udgiftsføres i resultatopgørelsen, medtages heller ikke. Derimod medtages alle aktiverede udgifter til egenproduktion af såvel materielle som immaterielle aktiver.

Hvis der i regnskabsåret er indgået nye finansielle leasing-kontrakter, skal leasing-genstandenes anskaffelsessum medtages, uanset om denne anskaffelsessum er aktiveret i regnskabet eller ej.

Tilgang

For tilgang anføres værdien for bogføringsmæssige og finansielle reguleringer, fx forskudsafskrivninger, kurstab og offentlige tilskud 1 000 kr / 1 000 euro

52	Immaterielle anlægsaktiver (herunder software)	52	
	Fast ejendom		
53	Køb af eksisterende bygninger (inkl grundværdi)	53	
54	Opførelsesudgifter for nybygninger (ekskl. grunde)	54	
54a	Heraf virksomhedens egenproduktion af nybygninger	54a	
55	Køb af ubebyggede grunde	55	
56	Ombygning og forbedring af bygninger og bygningsinstallationer, herunder opvarmnings- og ventilationsanlæg	56	
57	Veje, havne, pladser, spor o.l. Nyanlæg samt ombygninger, herunder grundforbedring, byggemodning mv	57	
57a	Heraf virksomhedens egenproduktion af anlæg (veje, havne, pladser, spor o.l.)	57a	
58	Køb af eksisterende anlæg (veje, havne, pladser, spor o.l.)	58	
59	Fast ejendom i alt	59	
	Driftsmidler		
60	Produktionsanlæg, maskiner, driftsmateriel og inventar	60	
60a	Heraf virksomhedens egenproduktion af produktionsanlæg, maskiner, driftsmateriel og inventar	60a	
61	Køb af eksisterende produktionsanlæg, maskiner, driftsmateriel og inventar	61	
62	Driftsmidler i alt	62	
63	Tilgang i alt (52+59+62)	63	
63a	Heraf investering i udstyr og anlæg til forureningsbekæmpelse (end-of-line udstyr)*	63a	

Afgang

For afgang anføres de afhændede aktivers **salgspris**. For afhændede bygninger og grunde er det beløbet omregnet til kontantværdi der skal anføres. Hvis salgsprisen ikke kendes, kan i stedet benyttes den bogførte værdi (svarende til de afhændede aktivers anskaffelsespris minus de akkumulerede afskrivninger på disse). 1 000 kr / 1 000 euro

64	Immaterielle anlægsaktiver (herunder software)	64	
	Fast ejendom		
65	Salg af bygninger (inkl grundværdi)	65	
66	Salg af ubebyggede grunde	66	
67	Salg af veje, havne, pladser, spor o.l.	67	
68	Fast ejendom i alt	68	
	Driftsmidler		
69	Salg af maskiner, driftsmateriel og inventar	69	
70	Afgang i alt (64+68+69)	70	

Supplerende spørgsmål

A. Handelsvarer

Punkt 71-73 udfyldes kun, hvis der i den angivne omsætning indgår handelsvarer

Som handelsvarer angives indkøbte varer, der alene udvejes, ompakkes eller opdeles i firmaet. Råvarer og mellemprodukter, der er indkøbt til brug i produktionen, men som sælges uden forarbejdning, skal medtages som handelsvarer. Indkøbte færdige dele, der samles af firmaet, betragtes som råvarer, der ikke skal medtages her.

I.000 kr./1.000 euro

71	Omsætning	71	_____
72	Køb	72	_____
73	Lager ultimo	73	_____

B. Finansiell leasing

Spørgsmål 74-76 besvares kun, hvis firmaet har ikke-udløbne finansielle leasing-kontrakter

Finansiell leasing er kendetegnet ved, at der foreligger en længerevarende (typisk svarende til aktivets brugstid) kontrakt, hvorefter alle væsentlige risici og fordele forbundet med den juridiske ejendomsret er overdraget til leasingtageren. Normalt vil de samlede afdrag i leasingperioden svare til anskaffelsessværdien af det leasede aktiv.

I.000 kr./1.000 euro

Hvis der i regnskabsåret er indgået nye finansielle leasing-kontrakter, skal leasing-genstandenes anskaffelsessum angives nedenfor:

74	Fast ejendom	75	_____
75	Veje, havne, pladser, spor o.l.	76	_____
76	Tekniske anlæg, maskiner, apparater og redskaber	77	_____

Er anskaffelsessummen ved finansiell leasing aktiveret i regnskabs balance?

Ja _____ Nej _____

Bemærkninger

Eventuel telefonisk henvendelse bedes rettet til: Navn		Dato samt evt. firmastempel
Telefonnummer	Lokalnummer	

Annex 7 Information for income tax



Oplysningsseddel '03
løn, pension, honorarer, uddelinger fra fonde mv.

[Link til bagside](#)

01

Indkomstmottagers CPR-nr. eller CVR-#8E-nr. (Skal udfyldes)

Arbejdsstedkode
(Se vejledningen)

02 _____

Den oplysningspligtiges CVR-#8E-nr.
(Skal udfyldes)

06 _____

Fulde navn

03

Adresse

04

Postnr. og postdistrikt

05

Den oplysningspligtiges navn, adresse og telefonnummer. Hvis De bruger stempel, skal De også sætte stempel på kopien til Indkomstmottageren.

Dokumentation af skatteoplysning

Inden De indsender oplysningssedlen, bør De læse vejledningen "Oplysningssedlen 2003"

Ansættelsesoplysninger (Se de af rubrikkerne 7-10 udfyldes)	Hele året (1/1- 31/12)		En sammenhængende periode		Flere perioder. I gå fald oplyses kun, om lønmottageren var ansat pr. 30/11		Arbejdssted og lig virksomhedens registreringsadresse	
	Fra dag md.		Til dag md.		09 ja søt X 10 nej søt X			
AM-Indkomst	07 søt X	08	/		11 søt X		13 _____,00	
A-Indkomst A-Indkomst, hvoraf der skal betales arbejdsmarkedbidrag (AM-bidrag) og særlig pensionsopbejling (SP-bidrag) Løn, honorarer mv. herunder feriepenge, løn under sygdom og barsel, lønstatud af erhverv art, vederlag til medlemmer af bestyrelser, udvækling mv. samt pensionsordninger ydet til tidligere ansatte. Jubilæumsgratiale mv. angives kun i rubrik 69-71. Bidrag til arbejdsgiveradministrerede pensionsordninger, herunder ATP, skal ikke medregnes i bruttobeløbet.								
A-Indkomst	A-Indkomst, hvoraf der ikke skal betales AM-bidrag						14 _____,00	
Sociale personale-, kvæpplige syge- og barselsdagpenge, udbetalinger fra A-kasse, uddannelsesydelse, 1. og 2. ledighedsdag udbetalt af arbejdsgiver, strøjer- og lockoutdagpenge, udbetalinger fra pensionskasser, samt andre udbetalinger, hvoraf der ikke skal betales AM-bidrag. Bidrag til arbejdsgiveradministrerede pensionsordninger, herunder ATP, skal ikke medregnes i bruttobeløbet.								
A-skat, AM- og SP-bidrag	A-skat						15 _____,00	
	AM-bidrag på 8 pct.						16 _____,00	
	SP-bidrag på 1 pct.						17 _____,00	
A-skattepligtige personalegoder. Beløbene skal medregnes i rubrik 13 el. 14	Værdi af bil til rådighed				Værdi af fri kost og logi efter Ligningsrådets satser			
	19 _____,00				21 _____,00			
Andre skattepligtige ydelser mv., hvor der ikke er trukket A-skat	B-Indkomst, der skal betales AM- og SP-bidrag af		B-Indkomst, der ikke skal betales AM- og SP-bidrag af		Hædersgaver ydet som engangsbeløb fra off. fonde		Naturnydelise m.m. (Arten angives i rubrik 67)	
	36 _____,00		38 _____,00		39 _____,00		40 søt X	
	46 _____,00		48 _____,00				Beløbene i rubrik 46 og 48 må ikke fratregges på selvangivelsen	
	ATP-bidrag i alt samt SP-bidrag på 1 pct. ved sygdom, som er afregnet til ATP		Skattefri rejse- og befordringsgodtgørelse samt skattefri uddannelsesydelise					
Personalegoder, der ikke er trukket A-skat af. Beløbene skal ikke medregnes i rubrik 36 el. 38	Værdi af fri helårsbolig		Værdi af fri sommerbolig i Danmark		Værdi af fri lystbåd		Værdi af fri TV-licens	
	50 _____,00		51 _____,00		52 _____,00		53 _____,00	
	Værdi af fri telefon		Personaleløn		Fri sommerbolig i udlandet		Frikort off. befordring	
	54 _____,00		60 søt X		62 søt X		63 søt X	
Supplerende oplysninger	Aligtløberigtiget aktietjen				Aneettes årlige andel vedr. pc-ordning			
	65 _____,00				66 _____,00			
Yderligere oplysninger							Kode	
67 _____							68 _____	
Engangsindkomst	Jubilæumsgratiale, fratrædelsesgodtgørelse og vederlag for afløsning af pensionsopsægn inkl. indbetalinger til pensionsordning (rubrik 70) og tinggaver (rubrik 71). (Bruttobeløb, dvs. inkl. AM-bidrag og SP-bidrag)				Hersat indbetalt til arbejdsgiveradministrerede pensionsordninger omfattes af Pensionsbeskatningslovens Kapitel 1		Hersat tinggaver (værdien angives med virksomhedens købspris, inkl. moms)	
	69 _____,00				70 _____,00		71 _____,00	

03.040 S 74

Annex 8 Retail Sales Index Questionnaire

Indsendes til Danmarks Statistik senest 12. juni 2003

Journal nr.

Branche

CVR-nr.

Fejl i eller ændringer til CVR-nr., navn og adresse bedes rettet i adressefeltet.

INDBERETNINGEN VEDRØRER:
DETAILSALGET I DANMARK

Månedlig omsætning inden for detailhandel

Ved månedlig omsætning forstås virksomhedens momspligtige salg.

Hvis flere butikker er ejet af samme firma, dvs. registreret på samme CVR-nr., skal indberetningen omfatte alle butikker med det pågældende CVR-nr. (fx kan man godt have flere SE-nr. under samme CVR-nr.).

Virksomhedens samlede omsætning bedes fordelt på salg til private, salg til institutioner og virksomheder samt salg til eksport.

Ved salg til *private* forstås det egentlige detailsalg, herunder også værdien af reparationsvirksomhed.

I gruppen *fødevarer og andre dagligvarer* medtages drikkevarer, tobaksvarer, toiletartikler, rengøringsartikler og andre varer, som indgår i de private husholdningers daglige forbrug. Blomster indgår i gruppen *andre forbrugsvarer*.

I gruppen *beklædning, fodtøj mv.* medtages lædervarer, garn og kjolestoffer, men ikke boligtekstiler, der indgår i gruppen *andre forbrugsvarer*.

Ved salg til *institutioner og virksomheder* samt salg til *eksport* medtages større leverancer på særlige vilkår til kaserner, hospitaler, skoler mfl. og alle former for engrossalg (dvs. salg til erhvervsvirksomheder).

Hvis det ikke er muligt at foretage en præcis opdeling, foretages den bedst mulige skønsmæssige opdeling. Hvis der ikke er omsætning i en gruppe anføres 0 (nul).

Oplysninger om den månedlige omsætning indhentes med hjemmel i § 8 i loven om Danmarks Statistik. Oplysningerne behandles fortroligt og vil ikke i nogen form blive videregivet til andre, hverken offentlige myndigheder eller private.

De kan selv vælge, om De vil angive omsætningen ekskl. eller inkl. moms.

Sæt ét kryds: Ekskl. moms Inkl. moms

Månedlig omsætning	J.nr.	Maj 2003 Hele kr.	Maj 2003 Hele kr.
Salg til private			
Fødevarer og andre dagligvarer			
Beklædning, fodtøj mv.			
Andre forbrugsvarer			
Salg til institutioner og virksomheder			
Salg til eksport (ekskl. moms)			
Samlet omsætning			

Hvis der er store ændringer i omsætningen, fx pga. ferie, udvidelse eller frasalg af butikker, bedes dette noteret.

Virksomhedens kontaktperson og telefonnummer ved evt. henvendelse

Annex 9: Process tables, 2003

Compilation of GNI PRODUCTION APPROACH	Level of Details	Basis for NA Figures										Adjustments			Final estimate				
		Surveys & Citations	Administrative Records	Combined Data	Benchmark extrapolations	CFM and rates	ECGROW & Imputed Dv.	Other EM	Total Europe-Models	Other	Total	Data validation	Conceptual	(1) Explicit Condit		(1) Explicit exhaustiveness	Balancing		
	A17																		
	TOTAL																		
Output of goods and services (at basic prices)																			
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
Output of goods and services (at basic prices)	A	3.1.5.1	3.1.3.1	3.1.4															
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
Output of goods and services (at basic prices)	B																		
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
Output of goods and services (at basic prices)	C																		
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
Output of goods and services (at basic prices)	D																		
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
Output of goods and services (at basic prices)	E																		
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
Output of goods and services (at basic prices)	F																		
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
Output of goods and services (at basic prices)	G																		
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
Output of goods and services (at basic prices)	H																		
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
Output of goods and services (at basic prices)	I																		
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
Output of goods and services (at basic prices)	J																		
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
Output of goods and services (at basic prices)	K																		
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
Output of goods and services (at basic prices)	L																		
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
Output of goods and services (at basic prices)	M																		
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
Output of goods and services (at basic prices)	N																		
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			

Compilation of GNI 2003	Level of Details	Basis for NA Figures										Adjustments				Final estimate	
		Surveys & Consistants	Administrative Records	Combined Data	Extrapolation and Models			Other	Total	Data validation	Conceptual	(i) Exhibit Cut-off	(ii) Exhibit exhaustiveness	Balancing			
					Benchmark extrapolations	CPIs and values	CFC (PI) & Imputed Dv.								Other ERM		Total E (sub)-Models
PRODUCTION APPROACH																	
	A17																
	TOTAL	254,807	57,411	1,316,856	47,896	18,188	89,862	163,176	315,222	0	2,411,325	-44,656	-10,357	2,764	13,578	1,286	2,853,949
	Output of goods and services (at basic prices)	254,807	57,411	1,316,856	47,896	18,188	89,862	163,176	315,222	0	2,411,325	-44,656	-10,357	2,764	13,578	1,286	2,853,949
	Intermediate consumption (at purchasers prices)	143,305	304,608	531,146	339,852	18,188	54,808	121,046	240,102	-74,318	1,205,530	-47,938	-26,138	1,514	13,578	1,638	1,201,071
	Gross value added (at basic prices)	58,952	1,010	260	0	0	0	0	0	0	59,895	336	658	0	15	0	60,875
	Output of goods and services (at basic prices)	3,743	867	130	3,000	0	3,000	3,275	0	0	38,020	438	2,383	0	15	0	39,841
	Intermediate consumption (at purchasers prices)	24,941	308	130	0	0	-2,224	2,224	792	0	23,846	-102	-1,728	0	15	0	22,024
	Gross value added (at basic prices)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	A																
	Output of goods and services (at basic prices)	3,886	0	38	0	0	0	0	0	0	3,918	-1	0	0	19	0	3,936
	Intermediate consumption (at purchasers prices)	2,052	0	31	0	0	0	0	0	0	2,120	0	33	0	0	0	2,157
	Gross value added (at basic prices)	1,797	0	8	0	0	0	0	0	0	1,798	-1	0	0	19	0	1,779
	B																
	Output of goods and services (at basic prices)	32,845	0	3,278	0	0	0	0	0	0	36,126	119	17	0	19	0	36,280
	Intermediate consumption (at purchasers prices)	4,086	0	1,857	0	0	0	0	0	0	5,920	70	0	0	0	0	6,002
	Gross value added (at basic prices)	28,759	0	1,421	0	0	0	0	0	0	30,206	51	-53	0	19	0	30,188
	D																
	Output of goods and services (at basic prices)	154	0	620,669	0	0	0	0	0	0	620,823	-9,270	9,236	0	907	0	616,676
	Intermediate consumption (at purchasers prices)	1,481	0	328,576	0	0	0	0	0	0	330,056	-7,013	6,900	0	208	0	335,001
	Gross value added (at basic prices)	1,327	0	186,977	0	0	0	0	0	0	194,627	-2,257	-3,434	138	907	0	190,984
	E																
	Output of goods and services (at basic prices)	36,334	10,167	0	0	0	0	0	0	0	46,501	2	113	0	23	0	46,636
	Intermediate consumption (at purchasers prices)	18,905	5,148	0	0	0	0	0	0	0	24,053	2	1,464	0	23	0	25,542
	Gross value added (at basic prices)	0	0	0	0	0	0	0	0	0	22,448	0	-511	0	0	0	21,937
	F																
	Output of goods and services (at basic prices)	0	37,862	520	0	18,188	0	103,729	121,918	0	160,239	0	1,790	0	3,736	1,295	167,120
	Intermediate consumption (at purchasers prices)	0	5,539	2	0	10,634	0	20,982	20,982	0	684	0	684	-232	0	1,295	103,351
	Gross value added (at basic prices)	0	32,323	517	0	18,188	0	82,747	100,936	-75,111	53,055	0	1,096	232	3,736	0	83,126
	G																
	Output of goods and services (at basic prices)	0	0	284,722	7,944	0	0	7,944	0	0	292,666	0	-26,143	918	4,061	0	271,501
	Intermediate consumption (at purchasers prices)	0	0	143,996	7,944	0	0	151,939	151,939	0	151,939	1,846	-28,597	422	1,846	0	125,410
	Gross value added (at basic prices)	0	0	140,727	0	0	0	0	0	0	140,727	-1,846	2,455	-466	0	0	140,608
	H																
	Output of goods and services (at basic prices)	0	0	32,923	0	0	0	0	0	0	32,923	0	0	0	129	0	33,772
	Intermediate consumption (at purchasers prices)	0	0	18,637	0	0	0	0	0	0	18,637	0	327	78	0	0	21,125
	Gross value added (at basic prices)	0	0	14,287	0	0	0	0	0	0	14,287	0	-307	51	1,564	0	17,647
	I																
	Output of goods and services (at basic prices)	18,976	8,873	274,325	0	0	0	0	0	0	302,222	-36,848	1,838	103	503	0	267,848
	Intermediate consumption (at purchasers prices)	6,765	4,983	187,628	0	0	0	0	0	0	199,376	900	-32,236	54	54	-500	167,554
	Gross value added (at basic prices)	12,211	3,890	86,746	0	0	0	0	0	0	102,846	-37,818	34,134	50	593	500	100,356
	J																
	Output of goods and services (at basic prices)	55,374	74,635	0	0	0	0	0	0	0	130,009	-478	2,731	0	0	0	130,569
	Intermediate consumption (at purchasers prices)	41,983	24,130	0	0	0	0	0	0	0	66,113	0	63,146	0	0	0	109,259
	Gross value added (at basic prices)	13,391	48,426	0	0	0	0	0	0	0	63,896	-478	2,731	0	0	0	64,125
	K																
	Output of goods and services (at basic prices)	0	5,971	200,109	39,852	0	80,962	39,844	160,739	0	368,730	-16,528	5,308	1,268	1,212	0	367,998
	Intermediate consumption (at purchasers prices)	0	1,636	88,862	34,828	0	22,154	12,678	34,828	0	135,338	-9,313	13,014	721	0	368	140,028
	Gross value added (at basic prices)	0	4,335	111,247	39,852	0	58,808	27,166	125,911	-12,923	252,411	-22,841	-7,706	547	1,212	-358	217,659
	K																
	Output of goods and services (at basic prices)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Intermediate consumption (at purchasers prices)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Gross value added (at basic prices)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	L																
	Output of goods and services (at basic prices)	2,792	114,152	0	0	0	0	0	0	0	116,944	673	1	0	0	0	117,617
	Intermediate consumption (at purchasers prices)	1,009	38,774	0	0	0	0	0	0	0	39,782	41	0	0	0	0	40,012
	Gross value added (at basic prices)	1,784	75,377	0	0	0	0	0	0	0	77,162	188	-40	0	0	0	77,668
	M																
	Output of goods and services (at basic prices)	2,157	99,000	7	0	0	0	0	0	0	92,165	300	8	0	52	0	92,525
	Intermediate consumption (at purchasers prices)	1,000	22,422	13	0	0	0	0	0	0	23,435	0	-6	0	0	0	23,429
	Gross value added (at basic prices)	1,157	67,578	-7	0	0	0	0	0	0	68,728	300	14	0	52	0	69,056
	N																
	Output of goods and services (at basic prices)	25,345	158,648	4	0	0	0	0	0	0	184,145	2,100	20	0	102	0	184,172
	Intermediate consumption (at purchasers prices)	4,846	49,812	3	0	0	0	0	0	0	48,836	480	94	0	0	0	49,422
	Gross value added (at basic prices)	15,851	118,836	1	0	0	0	0	0	0	133,313	-1,417	-68	0	102	0	133,300

Completion of GNI 2003		Level of Details		Basis for NA Figures										Adjustments			Final estimate		
PRODUCTION APPROACH		A17		Survey & Consensus	Administrative Records	Combined Data	Benchmark extrapolations	CPM and ratios	CFI/PM & Impaired Div.	Other ERM	Total Extrapolations	Other	Total	Data validation	Conceptual	(1) Explicit Cutoff	(1) Explicit exhaustiveness	Balancing	Final estimate
Output of goods and services (at basic prices)	11.7	30.7	4.2	3.3	1.5	4.8	10.2	20.0	-4.2	100.0	-3.9	2.2	0.1	1.1	0.1	100.0			
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
A Agriculture, hunting and forestry																			
Output of goods and services (at basic prices)																			
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
B Fishing																			
Output of goods and services (at basic prices)																			
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
C Mining and quarrying																			
Output of goods and services (at basic prices)																			
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
D Manufacture																			
Output of goods and services (at basic prices)																			
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
E Electricity																			
Output of goods and services (at basic prices)																			
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
F Construction																			
Output of goods and services (at basic prices)																			
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
G Wholesale and retail trade, repair of vehicles and personal and household services																			
Output of goods and services (at basic prices)																			
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
H Hotels and restaurants																			
Output of goods and services (at basic prices)																			
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
I Transport, storage and communication																			
Output of goods and services (at basic prices)																			
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
J Financial intermediation																			
Output of goods and services (at basic prices)																			
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
K Real estate, renting and business activity																			
Output of goods and services (at basic prices)																			
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
L Service of owner-occupied dwellings (D04)																			
Output of goods and services (at basic prices)																			
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
M Public administration and defence; compulsory social security																			
Output of goods and services (at basic prices)																			
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
N Education																			
Output of goods and services (at basic prices)																			
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			
O Health and social work																			
Output of goods and services (at basic prices)																			
Intermediate consumption (at purchasers' prices)																			
Gross value added (at basic prices)																			

Completion of GNI 2003	Level of Details	Basis for NA Figures										Adjustments			Final estimate
		Surveys & Consases	Administrative Records	Combined Data	Extrapolation and Models			Other	Total	Data validation	Conceptual	(1) Explicit Cut-off	(1) Explicit exhaustiveness	Balancing	
					Benchmark extrapolations	CPI and ratios	CFC (FM) & Imputed Div.								
INCOME APPROACH															
Compensation of employees	%														
Non-Financial Corporations	%														
Financial Corporations	%														
General Government	%														
Households	%														
NPISH	%														
(2) Gross operating surplus	%														
Non-Financial Corporations	%														
Financial Corporations	%														
General Government	%														
Households	%														
NPISH	%														
(2) Mixed income	%														
Production and imports	%														
Subsidies	%														
Residual item	%														
Gross domestic product	%														
Gross National Income															
Compensation of employees received from the rest of the world	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Compensation of employees paid to the rest of the world	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Property income received from the rest of the world	%	-0.1	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7
Property income paid to the rest of the world	%	-0.7	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8
Production and imports	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subsidies	%	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Gross national income	%	10.7	39.6	38.2	2.9	1.3	4.2	8.8	17.2	-5.3	100.3	-3.4	1.9	0.1	100.0

(1) Explicit cut-off and exhaustiveness adjustments - Further detailing of these adjustments could be introduced from the "Tabular Approach"

(2) Gross operating surplus - Member States that have detailed source data (independent) income measures, such as Ireland, France, and the UK, the level of details of the gross operating surplus must be increased to include a breakdown by sectors

Completion of GNI 2003 PRODUCTION APPROACH	Level of Details	Basis for NA Figures										Extrapolation and Models				Adjustments				Final estimate
		Surveys & Censuses	Administrative Records	Combined Data	Benchmark CFM and ratios	CFM (W) & CFM (R) & ratios	Other ESM	Total E-Strap-Models	Other	Total	Data validation	Conceptual	(1) Explicit Cut-off	(1) Explicit exhaustiveness	Balancing					
																W	R	W	R	
		0.1	0.2	0.6	0.0	0.0	0.1	0.1	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0				
		10.4	24.2	42.5	1.7	0.3	3.2	4.6	9.8	88.1	-1.8	-1.0	0.1	0.3	0.0	85.7				
		0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0				
		1.4	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.5	0.0	0.0	0.0	0.0	0.0	1.6				
		1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0				
		0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1				
		0.9	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0				
		1.9	0.0	0.3	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	2.2				
		0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0				
		0.0	0.0	13.0	0.0	0.0	0.0	0.0	0.0	13.0	0.0	0.0	0.0	0.0	0.0	12.9				
		0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0				
		1.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	1.8				
		0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0				
		0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	1.0				
		0.0	0.0	11.3	0.0	0.0	0.0	0.0	0.0	11.7	0.0	0.0	0.0	0.0	0.0	10.6				
		0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.9	0.1	0.0	0.0	0.0	0.0	1.0				
		0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	1.0				
		0.1	0.0	1.1	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	1.0				
		0.4	0.2	7.6	0.0	0.0	0.0	0.0	0.0	8.2	0.0	0.0	0.0	0.0	0.0	7.2				
		0.3	0.7	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0				
		1.4	3.1	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.1	0.0	0.0	0.0	4.6				
		0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.4	1.0	-0.1	0.0	0.0	0.0	0.0	1.0				
		0.0	0.2	9.3	1.2	0.0	3.2	1.6	6.1	15.7	-0.8	0.8	0.1	0.0	0.0	13.6				
		0.0	0.0	0.0	0.3	0.0	0.7	0.0	0.9	0.9	0.0	0.1	0.0	0.0	0.0	1.0				
		0.0	0.0	0.0	1.7	0.0	4.4	0.0	6.1	6.1	0.0	0.4	0.0	0.0	0.0	6.4				
		0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0				
		0.1	5.4	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	0.0	0.0	0.0	0.0	5.5				
		0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0				
		0.1	4.8	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0	0.0	0.0	0.0	4.9				
		0.1	0.8	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0				
		1.2	6.2	0.0	0.0	0.0	0.0	0.1	0.1	9.5	-0.1	0.0	0.0	0.0	0.0	9.4				

Til Eurostat

Report on compiling a Process Table for Denmark

Introduction

The process tables were compiled by mainly three persons, but with a few others contributing with minor parts as well. The three persons are all employed in the national accounts, and two of them are mainly occupied by compiling final national accounts. The process table covers 2003.

Compilation of the Process Table

Production side

The following lists which sources are classified within each category of the process table:

Surveys and censuses:

Sources based on surveys and subsequently grossed up using *fx* employment. This includes mainly industries dominated by quasi-corporations owned by government and not integrated in central and local government accounts.

Administrative records:

Government non-market activity and government owned quasi-corporations integrated in central and local government accounts as well as taxes and subsidies on products compiled on the basis of central and local government accounts, are placed here. Also, sources used for the compilation of financial activity is placed here, because it is based on information from the Financial Supervisory Authority (Finanstilsynet).

Combined data:

This category includes all industries covered by the industrial accounts statistics (the structural business survey). This source is placed in this category because it is based on both surveys, but also administrative sources from the tax-authorities (SLS-E).

Benchmark extrapolations:

Used partly for one industry (51000 transportation). It is used for the compilation of production of transport services made by enterprises by themselves (in Danish *formel transport*).

CFC (PIM), Imputed Dwelling Services:

This category is used for dwellings only. The production value of dwellings is compiled using price times quantity for all types of dwellings.

Other extrapolations and models

This category is used for the compilation of NPI's, the production value of artists and the production of households with employed persons.

Data validation:

Errors found during the balancing process are placed here. Adjustments made during the balancing process are split between actual balancing adjustments and corrections for errors in data.

Conceptual adjustments:

This includes on the production side the correction for:

- Licences and royalties
- Own account software
- Artistic originals
- Natural growth
- Production to inventories
- Price corrections to inventories of trading goods

On the input-side it includes the correction for:

- Intermediate consumption from stocks of intermediate goods
- Indirect production costs from company accounts (other production costs)
- Small tools
- Purchase of software
- Fees to the trade (employers organisations)
- Licences and royalties
- Fees and charges to general government
- Fringe benefits
- Insurance
- Directly paid financial intermediation services
- FISIM

Explicit cut-off adjustments:

This includes adjustments to the industrial accounts statistics to account for units not covered due to the threshold in the industrial accounts statistics which covers only firms with more than 0,5 man years.

Explicit Exhaustiveness Adjustments:

This category is used for adjustments for fringe benefits and the black economy. Please note that no corrections for illegal activity is shown here because illegal activity is made as an explicit adjustment to the GNI-notification only.

Balancing adjustments:

For production and input this category includes only actual balancing adjustments. Other corrections, mainly corrections for errors, made during the balancing process, is placed in the category data-validation.

Expenditure side

The following lists which sources are classified within each category of the process table showing the expenditure measure of GDP:

Household consumption expenditure

Surveys and censuses:

The retail trade index (DOI) and the household budget survey (FU)

Administrative records:

Tax information (taxed products such as alcohol, tobacco and cars) and the settlement statistics.

CFM and ratios:

When supply side estimates (or a fixed percentage of supply) determine household consumption expenditure. This occurs, among others, for rented dwellings and expenditure on government sales, fx kinder gardens.

CFC (PIM), Imputed Dwelling Services:

Owner occupied dwellings

Other extrapolations and models

Tourist revenue is allocated to relevant consumption groups using percentages from the input-output table.

Explicit Exhaustiveness Adjustments:

Adjustments are made for the black economy, fringe benefits and farmers consumption of own products.

Balancing adjustments:

Three types of balancing adjustments are placed here: Firstly, initial adjustments are made based on experience from previous balancing (chapter 5.7, step 18 in the GNI documentation). Secondly, the target totals are blanced in the provisional accounts. Thirdly, the balanced values from the provisional accounts are used as target totals when compiling the final accounts and hence balancing is undertaken again.

General government final consumption expenditure

Compiled using *administrative data*. The compilation corresponds to the compilation of general government output.

NPISH final consumption expenditure

The value of final consumption expenditure in NPISH is derived from the supply side and therefore categorised under *CFM and ratios*.

Gross fixed capital formation

Products of agriculture:

The source here is survey statistics for agriculture.

Metal products and machinery and equipment

Surveys and censuses are used for agriculture, mineral exploration and government owned quasi-corporations not integrated in central or local government accounts.

Administrative records are used for general government and government owned quasi-corporations integrated in central or local government accounts

Combined data are used for the part covered by industrial accounts statistics.

CFM and ratios are used for the part not covered by the above mentioned sources and information on total supply.

Conceptual adjustments are adjustments corresponding to adjustments on the input side (small tools threshold).

Explicit exhaustiveness covers mainly new enterprises.

Balancing covers pure balancing adjustments made during the balancing process.

Transport equipment

Is compiled using *CFM and ratios* on total supply. Adjustments are split between *data validation* and pure *balancing* adjustments.

Construction of housing

Is compiled using mainly number of square meters multiplied by square meter prices and is placed under *other extrapolations and models*.

Other constructions

Surveys and censuses are used for agriculture and government owned quasi-corporations not integrated in central or local government accounts.

Administrative records are used for mineral exploration, general government and government owned quasi-corporations integrated in central or local government accounts

Combined data are used for the part covered by industrial accounts statistics.

CFM and ratios are used for the part not covered by the above mentioned sources and information on total supply.

Explicit exhaustiveness covers mainly new enterprises.

Balancing covers pure balancing adjustments made during the balancing process.

Other products

Other products cover software, artistic originals and mineral exploration.

Surveys and censuses is used for investment in mineral exploration, which is based on a special questionnaire filled in by oil companies.

Administrative records are used for general government and government owned quasi corporations GFCF in own account software.

CFM and ratios are used for GFCF in own account software. The values here correspond to production of own account software.

Artistic originals are compiled using, among other things, information on royalties combined with assumptions and is placed under *other extrapolations and models*.

Conceptual adjustments for other products covers purchased software, and the values correspond to conceptual adjustments made to GDP from the production side.

Balancing adjustments relates to software only.

Changes in inventories

Surveys and censuses

Are used for compiling changes in inventories for agricultural products and energy.

Combined data

Industrial accounts statistics are used for all other changes in inventories than agricultural products and energy.

Data validation

Covers errors found during the balancing process and in 2003 relates to agricultural products.

Conceptual adjustments

Covers price corrections and corrections to changes in inventories of finished goods in construction. Output in construction should not increase inventories but should be recorded directly as GFCF.

Balancing

Covers adjustments made during the balancing process.

Exports and imports

Surveys and censuses:

Trade with EU-countries (Intrastat).

Administrative data:

Trade with non EU-countries (extrastat)

Conceptual adjustments:

Conceptual differences between the balance of payments statistics and the foreign trade statistics.

Income side

A process table is not compiled for the income side. As described in the GNI inventory chapter 4.0, GNI from the income side can in principle be derived from the target total module based on business accounts. After balancing GDP from the production side and GDP from the expenditure side, output and intermediate consumption are replaced by the balanced values, compensation of employees is replaced by values compiled on the basis of the working time account, and taxes and subsidies are replaced by values from government accounts. Gross operating surplus and mixed income is compiled as a residual.

Transition to GNI

Surveys and censuses

Information from a questionnaire used for compiling reinvested earnings on foreign direct investment is placed here.

Administrative records

The settlement statistics placed here.