

**Documentation of statistics for  
Annual national accounts, total economy 2016**

## 1 Introduction

The purpose of the statistics is to give a detailed overall picture of the economy within the framework of a system of coherent definitions and classifications. Official Danish national accounts figures can be found back to the 1930s. In 2014 the final national accounts are in accordance with the definitions in the European System of National and Regional Accounts (ESA2010). Consistent time series in line with the new definitions goes back to 1966.

## 2 Statistical presentation

The National Accounts are designed to present a complete picture of the economy. The National Accounts provide the conceptual and actual tool to bring to coherence all economic activity and development in Denmark.

### 2.1 Data description

In the final national accounts the economic flows are viewed from two different points of view. The economic transactions are on the one hand described in a functional system and on the other hand described in an institutional sector system. In the functional system, detailed information on product flows is available such as production, import and export, intermediate consumption, final consumption expenditure and gross fixed capital formation, including information about the incomes that are generated and the factors of production in the form of labour and capital goods that have participated in the production process. In the institutional sector system, distributive and financial transactions are described as well, since focus here is on the economic agents as decision-making units. The core of the final functional national accounts is approximately 2,350 product balances at current prices. Additionally, product balances in prices of the previous year as well as detailed information on gross fixed capital formation and capital goods are being compiled.

In the functional system the main aggregates of the Production account and the Generation of income account are compiled at the most detailed industry level of the final national accounts, i.e. at 117 industry groups. Figures on employment are compiled at this level as well. The main aggregates are: Production, Intermediate production, Gross value added, Compensation of employees and Gross operating surplus and mixed income. Of these, the first three are also compiled as chain volume indices (chained values). This is an attempt to isolate the volume part of the monetary values. In addition, figures are given for private consumption expenditure using a classification of 72 individual consumption groups and for gross fixed capital formation using a classification of 69 industries both at current prices and as chained values.

From 2008 on-wards the production of government goods for individual consumption is compiled using a new methodology in chained values (constant prices). The introduction of volume indicators means that the chained values now directly reflects the volumes produced of government goods for individual consumption, such as operations on public hospitals and public education in primary schools. The collective government goods e.g. public security and infrastructure are however still calculated using the input-method i.e. as the sum of production costs in constant prices. The introduction of volume indicators for production of government goods for individual consumption in constant prices is described in the publication "General Government Output and Productivity". In this the public volume indicators are treated and analysed in detail. It is free of charge and can be downloaded from the tab "Publications" on <https://dst.dk/statistik/emner/produktivitets-og-input-output>

The development in the volume of economic transactions involving products e.g. production, consumption and investment is illustrated by decomposing transaction values in current prices into their price and volume components. This decomposition is done for those aggregates of the national

accounts that relate to real transactions. The decomposition is done by calculating Laspeyres chain volume indices currently with base year 2010 (chained values).

The Laspeyres chain volume indices are calculated by extrapolating the values of the base period by the Laspeyres volume indices calculated with the previous year as base year. The frequent change of base year gives a better estimate of the year-to-year growth rates than growth rates calculated in a system with a constant base year. The drawback of chain volume indices is a lack of additivity in the chained values. Because of the lack of additivity the basic national accounts identities valid at current prices do not apply to volumes based on chain volume indices.

Besides the chained values for transactions involving products, are calculated chained values for some types of household income. These values describe the real income development, i.e. the development of the purchasing power of the income. Real income is calculated by correcting the development of the income for the change in prices of the products the income is assumed to buy. Disposable gross income is corrected with the price development of private consumption expenditure, and adjusted disposable income with the price development of actual individual consumption (sum of private consumption expenditure and government individual consumption expenditure). The chained values for disposable net income and adjusted disposable net income is calculated by subtracting the chained values for consumption of fixed capital from the corresponding gross values.

## **2.2 Classification system**

Statistics Denmark's industrial classification DBO7, which is a Danish version of the EU NACE, rev. 2. and the UN's ISIC, rev. 4, contains a number of standard classifications: the 127, 36, 19, and 10 classifications.

The final national accounts classification of 117 industries corresponds - with few deviations - to the 127 standard classification and the 117 industries of the national accounts can be aggregated to the other standard classifications. For this reason, national accounts figures can easily be compared to and used in connection with other statistics that are based on the DBO7-standard classifications.

However, comparisons with other statistics at a detailed industry level will often show differences, partly because of differences in definitions of variables, and partly because of the calendar year delimitation of the national accounts and its requirement of total coverage of the economic activity.

Internationally there is a high degree of comparability with the national accounts of other countries because the Danish national accounts are compiled in accordance with the definitions in the European System of National Accounts ESA2010.

## **2.3 Sector coverage**

All industries according to Danish Industrial Classification of All Economic Activities 2007 (DBO7).

## **2.4 Statistical concepts and definitions**

The balance of payments: The balance of payments is a specification of the value of the economic transactions abroad within a given period.

Gross national income (GNI): Gross national income (GNI) is generated by deducting from the gross domestic product the net property income to Rest of World (ROW), net compensation of employees to ROW, and production and import taxes minus subsidies (net) to ROW.

**Gross Domestic Product (GDP):** Gross domestic product, GDP, indicates the size of a country's economy. GDP can be calculated in three ways:

- Gross domestic product (GDP) in market prices is calculated from the production side by subtracting from production at market prices the total value of intermediate consumption at buyer prices.
- It can also be calculated from the income side as compensation of employees plus the surplus of production and mixed income plus taxes on production, net.
- Finally it can be calculated from the application side as the sum of all final uses in buyer prices minus the import of goods and services.

**Gross Value Added (GVA):** GVA is equal to the gross domestic product at base prices and is calculated for the individual business types as production at base prices minus intermediate consumption at buyer prices and is thus also equal to the sum of other production taxes (net), compensation of employee, and surplus of production and mixed income. For society as a whole, gross value added can also be calculated as the gross domestic product at market prices minus net product taxes.

**The national economy:** The national economy covers the transactions made by resident entities within a given period, such as a year or quarter.

**Fixed prices:** Calculation of fixed prices is necessary to make comparisons over time where the effect of price developments needs to be eliminated. Fixed prices are calculated using the prices from in the previous year, and these form the basis for calculating the chained values. In addition, fixed prices with a fixed base year (e.g. 2000) are also calculated.

**Supply Balance:** A compilation of the national accounts which shows both the supply of goods and services in a country over a period of time as well as the use of these goods. By definition, supply and use are always the same. The components of the supply balance are GDP and imports of goods and services on the supply side and consumption, gross investments and exports of goods and services on the usage side.

**Chained values:** Periodic changes (e.g. years) that are chained to create comparability over longer periods of time.

**Current prices:** Current prices are the price level that applies to goods and services in the current period. The contrast to current prices is Fixed prices.

**Primary income:** The income that resident entities receive through their direct participation in the production process and the income that the owner of a financial asset or natural capital receives in return for providing capital or natural capital to another institutional entity.

**Production boundary:** A productive activity is defined as an activity exercised under the control and responsibility of the entity that uses labour, capital as well as goods and services to produce goods and services. The activity does not include natural processes that take place without human participation or management, such as growth in fish stocks. An exception to this rule is production done in households. The only item production in households to be included is the construction of dwellings on one's own account and the production, storage, and processing of agricultural products for own use. The only service production in the households to be included is housing services that homeowners produce, services in the home provided by hired help, and volunteer activities that result in the production of goods, such as construction of a home, clubhouse, or other type of building which is registered as production.

**Residential unit:** An entity is a resident of a country if it is located within the economic territory of that country and conducts or intends to conduct economic activities and transactions to a significant extent for a period of at least one year.

Economic area: The economic area is understood as:

- The geographical area managed by a government within which persons, goods and services, and capital move freely.
- Duty-free zones.
- The national airspace, territorial waters, and the part of the continental shelf that lies within the international waters under the sovereignty of the country.
- Territorial enclaves (e.g. Danish embassies and consulates abroad).
- Deposits of oil, natural gas, etc. in international waters outside the country's continental shelf, which are utilized by resident entities.

## 2.5 Statistical unit

For the compilation of output, intermediate consumption, taxes linked to production and subsidies, wages and salaries, employment, fixed capital formation and depreciation, the statistical unit is the local kind-of-activity unit. For the compilation of distributive and financial transactions, which cannot be divided up unambiguously among the individual kind-of-activity units belonging to a decision making unit (enterprise), the unit is the larger institutional unit, which in most cases will be the same as the legal unit which is the enterprise.

## 2.6 Statistical population

The national accounts cover all resident enterprises, households or other units characterised by economic decision-making autonomy and their ability to enter into economic transactions with other resident or non-resident units.

## 2.7 Reference area

Denmark.

## 2.8 Time coverage

- Annual National Accounts, final 1966-2013
- Annual National Accounts, preliminary 2014-2015

## 2.9 Base period

Production, Intermediate production, Gross value added are also compiled as chain volume indices (chained values) with 2010 as base year. This is an attempt to isolate the volume part of the monetary values.

## 2.10 Unit of measure

Mill. DKK

## 2.11 Reference period

The flow figures in the national accounts refers to transactions during the year, while employment figures are averages over the year.

## **2.12 Frequency of dissemination**

Annually.

## **2.13 Legal acts and other agreements**

Act on Statistics Denmark § 6 and §§ 8 - 12.

Council Regulation (EU) No 549/2013 of May 21 2013 on the European system of national and regional accounts in the European Union (ESA2010) (OJ L 174 26.06.2013, p. 1).

## **2.14 Cost and burden**

There is no direct burden of response since data are collected by other offices in Statistics Denmark.

## **2.15 Comment**

Not available

## **3 Statistical processing**

The Final National Accounts are compiled using the method of product balancing. Supply and use of goods and services are compiled on a detailed level. The product balances are reconciled by using all relevant information. The sources of the Final National Accounts are primarily final statistics concerning the economy, industry structures, and prices.

### **3.1 Source data**

The data sources of the final national accounts consist primarily of all (final) statistics on economics, business structure, employment and prices.

Amongst such statistics the following can be mentioned:

- Accounting statistics (for private urban industries)
- Enterprise statistics
- Accounting statistics for publicly controlled enterprises
- Statistics on general government
- Agricultural statistics
- Statistics on manufacturing sales
- Statistics on the use of raw materials in manufacturing
- Household budget surveys
- Retail turnover statistics
- External trade statistics
- Balance of payments statistics
- Register-based labour force statistics
- Employment statistics
- Wholesale, consumer and net consumer price indices

### **3.2 Frequency of data collection**

Annual.

### **3.3 Data collection**

Not relevant for this statistics.

### **3.4 Data validation**

Data validation is carried out in three steps corresponding to the main processes of the data processing when compiling the National Accounts:

1. Thorough data validation is carried in primary statistics. See the relevant documentation of statistics for more information.
2. Data validation when preparing data for the product balance system. The National Accountants receives and process data on detailed unit-level which makes it possible to go back to the sources.
3. The final data validation is carried out when reconciling the product balance system into consistency.

### **3.5 Data compilation**

The data compilation is described together with "Data validation".

### **3.6 Adjustment**

There is no adjustments on data except what is already described under "data validation" and "data compilation".

## **4 Relevance**

The National Accounts are relevant as quantitative basis for everyone working with economics, ranging from the use of national accounts in the ministries of economic affairs for planning, analysing, modelling and forecasting purposes to their use in various public organisations and public interest in the structure and development of the economy.

### **4.1 User Needs**

The National Accounts are relevant as quantitative basis for everyone working with economics, ranging from the use of national accounts in the ministries of economic affairs for planning, analysing, modelling and forecasting purposes to their use in various public organisations and public interest in the structure and development of the economy.

### **4.2 User Satisfaction**

See "Brugerudvalg for Økonomisk Statistik:  
[www.dst.dk/da/OmDS/organisation/Brugerudvalg/OEkonisk-Statistik](http://www.dst.dk/da/OmDS/organisation/Brugerudvalg/OEkonisk-Statistik).

### **4.3 Data completeness rate**

Council Regulation (EU) No 549/2013 of May 21 2013 on the European system of national and regional accounts in the European Union (ESA2010) (OJ L 174 26.06.2013, p. 1).

## **5 Accuracy and reliability**

When the national accounts were based on the definitions in the European System of National Accounts ESA2010, the national accounts were at the same time undergoing a major revision, which means that all the levels were examined and evaluated, among other things for the sake of the Gross National Income compilations, which form the basis of a considerable amount of the financial contribution from Denmark to the EU.

A reasonable accuracy of the national accounts figures is maintained by compiling the product balances at a very detailed level. Furthermore, the compilation of the central variable GDP is to the greatest extent possible compiled from the point of view: production, expenditure and income.

For further information about sources and methods see: [www.dst.dk/nationalregnskabsmetode](http://www.dst.dk/nationalregnskabsmetode).

### **5.1 Overall accuracy**

The inaccuracy of the national accounts figures relates to the inaccuracy of the various sources which are used. However, the conceptual consistency and, over time, the uniform adaptation of the sources contribute to reducing the inaccuracy of the national accounts figures. In particular, the combination of the primary sources into a coherent system in many cases gives rise to errors, which therefore are not reflected in the final national accounts.

Statistical inaccuracy estimates do not exist.

### **5.2 Sampling error**

Not relevant for this statistics.

### **5.3 Non-sampling error**

Not measured. See "Overall accuracy".

### **5.4 Quality management**

Statistics Denmark follows the recommendations on organisation and management of quality given in the Code of Practice for European Statistics (CoP) and the implementation guidelines given in the Quality Assurance Framework of the European Statistical System (QAF). A Working Group on Quality and a central quality assurance function have been established to continuously carry through control of products and processes.



## 5.5 Quality assurance

Statistics Denmark follows the principles in the Code of Practice for European Statistics (CoP) and uses the Quality Assurance Framework of the European Statistical System (QAF) for the implementation of the principles. This involves continuous decentralized and central control of products and processes based on documentation following international standards. The central quality assurance function reports to the Working Group on Quality. Reports include suggestions for improvement that are assessed, decided and subsequently implemented.

## 5.6 Quality assessment

When the national accounts were based on the definitions in the European System of National Accounts ESA2010, the national accounts were at the same time undergoing a major revision, which means that all the levels were examined and evaluated, among other things for the sake of the Gross National Income compilations, which form the basis of a considerable amount of the financial contribution from Denmark to the EU.

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## 5.7 Data revision - policy

Statistics Denmark revises published figures in accordance with the [Revision Policy for Statistics Denmark](#). The common procedures and principles of the Revision Policy are for some statistics supplemented by a specific revision practice.

## 5.8 Data revision practice

Preliminary figures are compiled 3 times a year and published end of March, end of July and in the beginning of November. The final figures are published once a year in November 3 years after the reference year.

## 6 Timeliness and punctuality

First version of preliminary yearly national accounts figures are published end of March the following year. The final figures are published 3 years after the reference year.

The statistics are usually published according to schedule.

### 6.1 Timeliness and time lag - final results

First version of preliminary yearly national accounts figures are published end of March the following year. The final figures are published 3 years after the reference year.

### 6.2 Punctuality

The statistics are usually published according to schedule.

## **7 Comparability**

Internationally there is a high degree of comparability with the national accounts of other countries because the Danish national accounts are compiled in accordance with the definitions in the European System of National Accounts ESA2010.

Statistics Denmark's industrial classification DB07, which is a Danish version of the EU NACE, rev. 2. and the UN's ISIC, rev. 4, contains a number of standard classifications: the 127, 36, 19, and 10 classifications.

### **7.1 Comparability - geographical**

Internationally there is a high degree of comparability with the national accounts of other countries because the Danish national accounts are compiled in accordance with the definitions in the European System of National Accounts (ESA2010) which is a European version of the UN's "A System of National Accounts 2008" (SNA2008).

### **7.2 Comparability over time**

It is a fundamental idea when compiling national accounts compilation that the figures to the largest possible extent should be comparable over time. This means e.g. that new sources always have to be adapted to the concepts of the national accounts, and that changes of existing sources cannot be seen directly as changes of variables and concepts in the national accounts statistics.

Likewise, whenever new international definitions is implemented in the national account system, revisions have to be implemented back in time to secure comparability. Consistent time series in line with the new definitions in ESA2010 goes back to 1966.

However, fundamental changes of nomenclatures, e.g. industrial classification or consumption classification, invariably result in changes in the national accounts, as was the case recently with the introduction of Statistics Denmark's latest industrial classification DB07.

### **7.3 Coherence - cross domain**

Statistics Denmark's industrial classification DB07, which is a Danish version of the EU NACE, rev. 2. and the UN's ISIC, rev. 4, contains a number of standard classifications: the 127, 36, 19, and 10 classifications.

The final national accounts classification of 117 industries corresponds - with few deviations - to the 127 standard classification and the 117 industries of the national accounts can be aggregated to the other standard classifications. For this reason, national accounts figures can easily be compared to and used in connection with other statistics that are based on the DB07-standard classifications.

However, comparisons with other statistics at a detailed industry level will often show differences, partly because of differences in definitions of variables, and partly because of the calendar year delimitation of the national accounts and its requirement of total coverage of the economic activity.

### **7.4 Coherence - internal**

There is per se fully internal consistency in the National Accounts.

## **8 Accessibility and clarity**

[The webpage of National Accounts](#)

www.statbank.dk - [National accounts and government finances](#)

### **8.1 Release calendar**

The publication date appears in the release calendar. The date is confirmed in the weeks before.

### **8.2 Release calendar access**

The Release Calendar can be accessed on our English website: [Release Calendar](#).

### **8.3 User access**

Statistics are always published at 8:00 a.m. at the day announced in the release calendar. No one outside of Statistics Denmark can access the statistics before they are published.

### **8.4 News release**

See "Nyt fra Danmarks Statistik - Nationalregnskab og offentlige finanser"  
[www.dst.dk/en/Statistik/emner/aarligt-nationalregnskab/aarligt-nationalregnskab-hele-oekonomien](http://www.dst.dk/en/Statistik/emner/aarligt-nationalregnskab/aarligt-nationalregnskab-hele-oekonomien).

### **8.5 Publications**

Publications: [www.dst.dk/en/Statistik/Publikationer](http://www.dst.dk/en/Statistik/Publikationer).

### **8.6 On-line database**

[Annual National Accounts](#)

### **8.7 Micro-data access**

The figures in Statbank Denmark are available on the Internet free of charge. More detailed data are available at a charge. It is possible to buy data from the approximately 2,350 product balances at current prices, prices of the previous year and at constant prices, typically in the form of, e.g., a single product balance or the product composition of a given consumption group.

Information on gross fixed capital formation is also sold in its most detailed form, i.e. as information on the product composition of a given industry.

### **8.8 Other**

Internal deliveries to ADAM.

### **8.9 Confidentiality - policy**

Not relevant for these statistics.

### **8.10 Confidentiality - data treatment**

Not relevant for this statistics.

### **8.11 Documentation on methodology**

Specific information about the latest major revision of National Accounts:

<http://dst.dk/en/Statistik/dokumentation/hovedrevideret-nationalregnskab.aspx>.

### **8.12 Quality documentation**

Results from the quality evaluation of products and selected processes are available in detail for each statistics and in summary reports for the Working Group on Quality.

## **9 Contact**

The administrative placement of this statistics is in the division of National Accounts. The persons responsible are:

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### **9.1 Contact organisation**

Statistics Denmark

### **9.2 Contact organisation unit**

National Accounts, Economic Statistics

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