

## Øresundsregional Bruttoregionalprodukt (ESA 2010)

### 1. Contents of the time series or domain of the statistics

*Name of the time series or domain of the statistics* Regional and national accounts statistics for the Öresund Region.

*Contents of the time series* The time series contain some of the most important variables of the National Accounts for the Öresund Region as well as for the whole of Denmark and Sweden. The following variables are used: GRP (gross regional product) GRP per capita, GRP per person employed, mean population, gross value added, employment, compensation of employees (payable by resident producers), compensation of employees (received by resident employees). Furthermore, the following variables are published nationally: gross fixed capital formation, depreciations, production value and employers' social contributions.

### 2. Primary data/sources

*Danish sources* **Gross value added and GDP/GRP**  
The regional compilations of gross value added are to a great extent based on the same data sources as those used for the national estimates.

The most important sources for compiling regional gross value added are:

- Accounts statistics on non-agricultural industries
- Regional gross value added at factor cost in agriculture
- Database for Integrated Public Accounts (DIOR)
- VAT statistics
- Register-based Labour Force Statistics
- Research and Development Statistics
- Employment in businesses

In addition, quantitative indicators are used in, e.g. some sectors of the transport industry, where information on the number of passengers is used in distributing regional gross value added. Within the construction industry, information on completed square metres extracted from the Register of Buildings and Dwellings is used in the construction industry.

The industries *extraction of oil and gas* and *services provided for the extraction of raw materials* are referred to the region "outside the region", as all activities in connection with the extraction of oil and gas take place in the North Sea.

The compilation of gross value added is conducted at the most detailed industry grouping of the National Accounts, comprising 117 groups of industries. For the industries to which accounting figures are distributed, production value and intermediate consumption are distributed separately.

National deflators are used for estimating gross value added at constant prices, as regional price indices are not available. Production value and intermediate production are deflated separately, implying that regional differences in the production process are incorporated into the implicit price indices. This method is called double-deflation.

GRP is estimated by distributing proportionally the national GDP, together with total regional gross value added.

Regional gross value added and GRP measure the production at the workplace and thereby incorporate the value contributed by the cross-border workers.

### **Employment**

The most important source for compiling regional employment is the Register-based Labour Force Statistics which measure employment by the end of November. Also cross border commuters are incorporated into the distribution.

Employment in the industries *construction, aviation and extraction of oil and gas* and *services provided for the extraction of raw materials* is distributed by the activity indicator, which is also used in distributing gross value added.

In the national statistics, the estimates of employment are based on the Working Time Account (WTA). The statistics on employment in the WTA are compiled on the basis of the Register-based Labour Force Statistics and short-term data sources for describing the development throughout the year. Cross-border workers are incorporated into the national statistics.

### **Compensation of employees (payable by resident producers)**

The regional statistics on compensation of employees (payable by resident producers) are compiled on the basis of the aggregate wage and salary costs in the statistics on employment in businesses. Industries dominated by public non-market activity make use of accounting data from the Database for Integrated Public Accounts.

Compensation of employees in the industries *construction, aviation and extraction of oil and gas* and *services provided for the extraction of raw materials* is distributed by the activity indicator, which is also used in distributing gross value added and employment.

The national statistics are compiled on the basis of the aggregate wage and salary costs in the WTA (based on the aggregate wage and salary costs in the statistics on employment in businesses) and the Database for Integrated Public Accounts. Accounting data are used in the financial business

### **Compensation of employees (received by resident employees)**

The income statistics make up the data source used in the regional distribution of compensation of employees (received by resident employees).

In the national statistics, compensation of employees (received by resident employees) is estimated as compensation of employees (payable by resident producers) to which earnings from rest of the world to Denmark are added and less earnings from Denmark to rest of the world. The balance of payments statistics make up the data source for earnings to and from rest of the world.

### **Gross fixed capital formation**

The national statistics on gross fixed capital formation are compiled from the following data sources:

- Agricultural Statistics
- Database for Integrated Public Accounts
- Accounts Statistics for Public Corporations
- Research and Development Statistics
- Register of Buildings and Dwellings
- Construction Cost Index
- Manufacturers' Sales of Commodities
- Product statistics for the ICT industries
- External Trade Statistics
- Accounts Statistics for Private Non-agricultural Industries
- Media Statistics
- Register of Motor Vehicles
- Shipping Register
- Aircraft Register

### **Consumption of fixed capital**

Consumption of fixed capital (depreciations) is only compiled nationally and is estimated on the basis of assumptions of life-spans for capital goods and depreciation profiles.

### **Other information**

Information on the source statistics used in the Danish National Accounts is available from the Quality Declarations prepared for the statistics. Links to the Quality Declarations can be seen on page 9.

The compilation of the regional accounts hinges on the National Accounts and the regional statistics. The data sources used in the National Accounts must as far as possible be applied in the regional accounts. The indicators and sources used in estimating regional value added are based on data related to the geographic location of production.

The most important sources for estimating regional value added are as follows:

- Corporate finances and accounts (FEK)
- Gross pay based on income of statements (LSUM)
- Statistics on aggregate wage and salary costs
- Annual accounts concerning finances and accounts of the municipal authorities
- Research and Development Statistics

Furthermore, the statistical business register is indirectly an important source for the regional accounts, as the register forms the basis of the sample selection and partly functions as a basic register from which information for other registers can be extracted with regard to businesses at Statistics Sweden.

In addition, a number of sources are used in connection with specific industries. For example, statistics on the number of passengers and transport of goods in the transport sectors, shipping and aviation are applied. Other examples are accounts statistics on agriculture and forestry, energy statistics, database for real property and register-based labour market statistics (RAMS).

All estimates are conducted at the most detailed regional level, which is the level of municipalities. The estimates are conducted for 67 industry aggregates in the sectors where activities take place. The basis of the regional estimates is made up by regional distribution keys applied in distributing national gross value added in the municipalities. The total sum of gross regional product (GRP) in the regions produces the gross domestic product (GDP) of Sweden and the total sum of the regional accounts of the industries produces the total accounts for industries in the whole of Sweden.

The national price index is used in estimating value added at constant prices, as no regional price statistics are available. Value added is deflated regionally and for each industry, where the method applied is called single-deflation.

### **Employment**

The most important source for distributing the average number of persons in employment by industries and regions is the register-based labour market statistics (RAMS), where employment is compiled in November of each year. These statistics make it possible to compile regional statistics on the number of persons in employment by, respectively, location of the workplace (day-population) and by place of

residence (night-population). This implies that it is not necessary to make corrections with regard to commuting. Foreign employees engaged in Swedish production are also incorporated into the statistics.

The main source in the National Accounts for estimating the average number of persons in employment in the total economy is made up by the labour force survey (AKU) subject, however, to some adjustments in accordance with the definition in the National Accounts. For industry and sector-specific estimates, RAMS are used as well as short-term and structural statistics on earnings for private, municipal regions and public activities.

#### **Compensation of employees (payable by resident producers)**

The regional distribution of compensation of employees (in Swedish production) is made up by gross pay based on income of statements (LSUM). The register is based on administrative material, which is regulated by tax legislation and implies that all persons who have paid out wages and salaries, fees, allowances or tax advantages, which are considered taxable income of services, must be entered on the income statements. The payer is also liable to give provide information on the number of the workplaces, whereby it is possible to specify the amounts paid out to the correct region. Furthermore, the register is supplemented by data from the register of businesses concerning the institutional sector code and activity of the paying business as well as the activity and municipal code of the workplace.

The most important source in the National Accounts is LSUM. For industry and sector-specific estimates, FEK and data from the national finances and accounts for the municipal authorities are applied.

#### **Compensation of employees (received by resident employees)**

The source for the regional distribution of compensation of employees (for Swedish households) is the register of income and taxation.

The national estimates of compensation of employees (for Swedish households) comprise compensation of employees (in Swedish production), to which earnings from rest of the world to Sweden are added and earnings from Sweden to other countries are deducted. The source to earnings from and to Sweden is the balance of payments.

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

Some of the sources in the National Accounts used for compiling gross fixed capital formation are the following:

- Investment survey
- Corporate finances (FEK)
- Swedish National Financial Management Authority
- Annual accounts concerning finances and accounts of the municipal authorities
- Research and Development Statistics
- External trade statistics

- Finance market statistics
- Statistics on agriculture and forestry
- Building and dwelling statistics
- Register of motor vehicles

### **Consumption of fixed capital**

Consumption of fixed capital (depreciations) is only compiled nationally and is estimated on the basis of assumptions of life-spans for capital goods and depreciation profiles.

### **Other information**

Information on the source statistics used in the Swedish National Accounts is available from the Quality Declarations prepared for the statistics. Links to the Quality Declarations can be seen on page 10.

### *Comparability*

The methods for estimating national and regional gross value added and GDP in Denmark and Sweden are comparable, as the estimates are in most cases based on comparable data sources. In the regional estimates, there is, however, a difference as to the method applied for the regional distribution of gross value added in the construction industry. In Denmark, the indicators for construction activity are applied for distributing production to the regions, whereas in Sweden accounts are applied. Denmark distributes production in the construction industry to the region where the production takes place, whereas in Sweden production is distributed to the registered address of residence of the business.

The methods applied for estimates at constant prices of regional value added differ between Denmark and Sweden. Denmark applies double-deflation, which implies that production is deflated by the production price index and intermediate consumption by relevant price indices in relation to the goods and services that are used. In Sweden, single-deflation is applied, which implies that gross value added is directly deflated. Estimates conducted on the basis of Danish data show that the difference in the method only gives rise to a minor impact in the form of quantity changes in gross value added for the overall economy. At the level of industries, the two methods differ with regard to quantity changes, where primarily businesses within manufacturing show that there are great differences in some years. Despite this circumstance, the impact is limited and the average quantity change for the entire period remains relatively unchanged.

For further information concerning comparability between the methods applied for regional distribution of gross value added in Denmark and Sweden, please see: *The possibilities of expanding the regional accounts statistics of the Örestat Region.*

The sources used for estimating the national employment rate in Denmark and Sweden are not comparable. The Working Time Account is used in Denmark, which is primarily based on register-based information, whereas Sweden uses the labour force survey (AKU). However, it is

assessed that the labour force survey provides a reliable estimate of the number persons employed and against this background it is considered that the national employment figures for Denmark and Sweden are comparable.

The register-based labour market statistics applied for regional distribution of the average number of persons employed are comparable.

The compilation of compensation of employees in Denmark as well as Sweden is based on administrative registers, and the figures are consequently comparable.

The sources and methods applied for compiling gross fixed capital formation and consumption of fixed capital (depreciations) are comparable.

### **3. Population (statistical concepts)**

*Population in general  
– detailed explanation  
of contents*

The National Accounts are compiled in accordance with the definitions laid down in EU's "European System of National Accounts - ESA95", which is based on "System of National Accounts 2008" (SNA2008). The regional national accounts statistics are compiled in accordance with EU's "Manual on regional accounts methods".

#### **Definition of the national economy**

The national economy comprises units whose economic centre of interest is situated within the economic territory of the country in question. These units are called resident units.

The term economic territory means:

1. the geographic territory administered by a government within which persons, goods, services and capital circulate freely;
2. any free zones;
3. the national air-space, territorial waters and the continental shelf lying in international water, over which the country enjoys exclusive rights;
4. territorial enclaves (e.g. embassies and consulates abroad)
5. deposits of oil, natural gas, etc. in international waters outside the continental shelf of the country, which is exploited by resident units.

A unit has a centre of economic interest in a country, provided that it is located within the economic territory of the country in question and is engaged in or intends to be engaged in economic activities and transactions to a considerable extent over the course of a period of at least one year.

In connection with the regional accounts, the economic territory can be divided into the regional territory and the extra-regio territory. The geographic territory covers items 1 and 2 above and the extra-regio territory covers items 3 to 5. Activities taking place in the extra-regio territory are transferred to the region “outside the region”.

### **The production concepts of the National Accounts**

The National Accounts comprise all productive activities within the economic territory. The activity consists of all natural processes taking place without the participation and management of any human beings, e.g. growth in fish depositories.

Black activity is covered by the National Accounts. As these activities are not included in the register-based statistics, supplements with regard to black output, earnings and employment are estimated in the National Accounts.

Household production of goods on own account is also included in the production concept in the National Accounts, provided that production is of a significant scope. A household’s production of services is not included, if the services are produced and consumed within the same household. Within non-market activity the production value is estimated from the perspective of input, i.e. as the total sum of compensation of employees, intermediate consumption, other taxes less subsidies on production and consumption of fixed capital.

### **Gross value added and GDP**

Gross value added is the production value at basic prices less intermediate consumption. Basic prices are arrived at by deducting taxes on products (e.g. VAT and excise duties) and adding subsidies on products at market prices (purchaser’s prices). GDP is equal to gross value added at market prices, i.e. gross value added to which taxes on products are added, less subsidies on products.

### **Employment**

The concept of employment in the National Accounts comprises the average number of self-employed persons and employees, including persons temporarily absent (leave and strikes/lockout) who are employed with resident businesses, and consequently include persons living abroad and who are employed with a resident business. However, resident persons working abroad are excluded. Only the primary job is included. A person, who is simultaneously employed in several jobs, is only included with his/her principal job.

### **Compensation of employees**

Compensation of employees comprises all forms of pay in cash and kind payable by the employers to their employees for work conducted. Compensation of employees consists of the following sub-components:

- Wages and salaries in cash
- Fringe benefits

- Employers' actual social contributions
- Employers' imputed social contributions

The National Accounts compile compensation of employees payable by resident employers as well as compensation of employees received by resident employees

### **Gross fixed capital formation**

Gross fixed capital formation consists of resident producers' acquisitions less disposals of fixed assets, which are included as part of the capital stock of the industries in the country in question. Gross fixed capital formation comprises new investments and net acquisitions of second-hand capital goods. Investment goods manufactured for own use, are included in gross fixed capital formation at the time of production. Also included is expenditure on major improvements of existing fixed capital goods as well as costs in connection with the delivery and acquisition of investment goods in gross fixed capital formation.

The following assets are included in gross fixed capital formation:

- Machinery and equipment, including, e.g. computer
- Means of transport
- Dwellings, rented as well as owner-occupied dwellings
- Other buildings and plants, including soil improvement in agriculture
- Changes in livestock included in production year by year, e.g. breeding animals and dairy cattle
- Computer software
- Original works within entertainment, literature and arts
- Expenditure on exploration of oil, gas and minerals
- Military equipment
- Research and Development

### **Consumption of fixed capital**

Consumption of fixed capital (depreciations) is a measurement of the physical and technical deterioration of fixed capital. It should be noted that consumption of fixed capital in the National Accounts distinguishes itself from the concept of depreciations in the accounts of businesses, as depreciations in business accounts can also contain an element of re-assessment as the result of price changes.

*Danish population* The statistics are compiled in accordance with the guidelines described above.

*Swedish population* The statistics are compiled in accordance with the guidelines described above.

*Comparability* The Danish and Swedish statistics are compiled in accordance with the guidelines described above, and are consequently comparable with regard to concepts.

#### 4. Variables and construction

*Common list of variables* The delimitation of the variables and the primary source data are described in paragraphs 2 and 3. The variables gross value added, production value, compensation of employees (payable by resident producers), gross fixed capital formation, consumption of fixed capital, employment and number of hours worked are published at the level of 11 industries, corresponding to the standard grouping of 10 industries, where the industry, manufacturing, which is included in the industry, manufacturing, raw materials and supply in the 10-grouping, is published separately. The variables gross value added, production value, GDP, gross fixed capital formation, consumption of fixed capital, compensation of employees and employers' actual social contributions are compiled in terms of both values subjected to exchange rate adjustment and purchasing power adjustment.

Furthermore, gross value added, GDP, gross fixed capital formation and consumption of fixed capital are compiled in terms of constant prices (chained values, 2010 prices).

*Construction of variables* The National Accounts are compiled by aggregating more or less all available existing economic primary statistics. The publications "National Accounts 2011" and "National Accounts – sources and methods" from 2002 provide a description of how the National Accounts are compiled. The methods applied for calculations at constant prices in the National Accounts are described in the publication "National Accounts - constant-price calculations" from 2002.

The compilation of regional gross value added is described in the report "The possibilities of expanding the regional accounts statistics of the Öresund Region". The construction of the remaining variables in the regional accounts is described in paragraph 2.

*Compilation of statistics* The Swedish data are submitted to Statistics Denmark, where the data are, together with the Danish data, subjected to exchange rate conversion, purchasing power adjustment, aggregated and calculated at constant prices. Eurostat's published foreign exchange rates and purchasing power parities are used for the exchange rate conversion and purchasing power adjustment. As purchasing power parities have not been published by Eurostat for the period before 1995, purchasing power parities published by the OECD are used for the period before 1995.

*Comparability* ..

#### 5. Break in the series

*Break in the series in general* There are no breaks in the data series that are made available in the Öresund Database. The Swedish regional statistics are compiled in accordance with the guidelines in ENS2010 from the year 2000 as described below. As a result of this, the regional tables in the Öresund

Database do not contain figures, gross valued added and GDP at constant prices which are distributed by industry until the year 2000.

*Break in the Danish data* There is not break in the Danish data at the level of detail published in the Öresund Database.

*Break in the Swedish data* The Swedish regional statistics are compiled in accordance with the guidelines in ENS2010 from the year 2000. The national statistics are compiled from 1993.

## **6. Non-disclosure practice**

*Non-disclosure practice* There are no problems with regard to non-disclosure practice, as data are aggregated to a level, where individual businesses and private individuals cannot be identified.

## **7. Differences from other published statistics and quality assurance**

*Differences from other published statistics* The data are consistent with the data published in Eurostat's databank and in Statistics Denmark's and Statistics Sweden's databanks. The Öresund Database is the only databank in which total figures covering the Öresund Region (Region Hovedstaden, Region Sjælland and Region Skåne) are available.

*Quality assurance* The data are based on already published figures which have been thoroughly subjected to data editing and checks. Consequently, the quality of the published figures is considered high.

## **8. Reference time**

*Reference time in general* The reference time of the statistics is the year in which a given transaction took place. Employment and mean population are estimated as an average over the year.

*Reference time for Danish variables* The reference time of the statistics is the year in which a given transaction took place. Employment and mean population are estimated as an average over the year.

*Reference time for Swedish variables* The reference time of the statistics is the year in which a given transaction took place. Employment and mean population are estimated as an average over the year.

*Comparability* The statistics are comparable.

## **9. Intervals of updating**

*Interval of updating* The time series are updated annually.

<i>Publication time</i>	The statistics are published 24 months after the year of reference.
<i>Further information</i>	The calendar showing the scheduled publication of statistics is available from <a href="http://www.orestat.se/sv/offentliggorelseskalender-0">http://www.orestat.se/sv/offentliggorelseskalender-0</a> .

## 10. Contact information

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## 11. Links to relevant statistics

Danish quality declarations:

Links to the quality declarations outlining the National Accounts  
Annual National Accounts

<http://www.dst.dk/da/Statistik/dokumentation/kvalitetsdeklarationer/aarligt-nationalregnskab--hele-oekonomien.aspx>

Earnings and employment

<http://www.dst.dk/da/Statistik/dokumentation/kvalitetsdeklarationer/beskaeftigelse--loen-og-arbejdstid.aspx>

Regional accounts

<http://www.dst.dk/da/Statistik/dokumentation/kvalitetsdeklarationer/regional-regnskaber.aspx>

Links to the quality declarations outlining the source statistics

Accounts statistics on private non-agricultural industries

<http://www.dst.dk/da/Statistik/dokumentation/kvalitetsdeklarationer/regnskabstatistik-for-private-byerhverv.aspx>

GDP at factor cost in agriculture

<http://www.dst.dk/da/Statistik/dokumentation/kvalitetsdeklarationer/landbrugets-bruttofaktorindkomst.aspx>

General government accounts

<http://www.dst.dk/da/Statistik/dokumentation/kvalitetsdeklarationer/regnskaber-for-offentlig-forvaltning-og-service-2013.aspx>

VAT statistics

<http://www.dst.dk/da/Statistik/dokumentation/kvalitetsdeklarationer/firmaernes-koeb-og-salg---momsstatistik--.aspx>

Register-based labour force statistics

<http://www.dst.dk/da/Statistik/dokumentation/kvalitetsdeklarationer/registrbaseret-arbejdsstyrkestatistik.aspx>

Employment in businesses

<http://www.dst.dk/da/Statistik/dokumentation/kvalitetsdeklarationer/erhvervsbeskaeftigelsen.aspx>

Statistic on building activities:

<http://www.dst.dk/da/Statistik/dokumentation/kvalitetsdeklarationer/byggevirksomheden.aspx>

Working time account:

<http://www.dst.dk/da/Statistik/dokumentation/kvalitetsdeklarationer/detaerlige-og-det-kvartalsvise-arbejdstidsregnskab.aspx>

Income statistics

<http://www.dst.dk/da/Statistik/dokumentation/kvalitetsdeklarationer/indkomststatistik.aspx>

Balance of payments statistics

<http://www.dst.dk/da/Statistik/dokumentation/kvalitetsdeklarationer/betalingsbalance.aspx>

Swedish quality declarations:

Annual compilation of the National Accounts

[http://www.scb.se/Statistik/NR/NR0102/\\_documents/ESA95%20GNI%20INVENTORY.pdf](http://www.scb.se/Statistik/NR/NR0102/_documents/ESA95%20GNI%20INVENTORY.pdf)

[http://www.scb.se/Statistik/NR/NR0103/\\_dokument/NR0103\\_BS\\_2012\\_SB\\_140917.pdf](http://www.scb.se/Statistik/NR/NR0103/_dokument/NR0103_BS_2012_SB_140917.pdf)

Regional accounts

[http://www.scb.se/statistik/NR/NR0105/\\_dokument/NR0105\\_DO\\_2012\\_150122.pdf](http://www.scb.se/statistik/NR/NR0105/_dokument/NR0105_DO_2012_150122.pdf)

Links to other statistics:

Corporate finances

[http://www.scb.se/Statistik/NV/NV0109/\\_dokument/NV0109\\_BS\\_2012.pdf](http://www.scb.se/Statistik/NV/NV0109/_dokument/NV0109_BS_2012.pdf)

Labour force survey:

[www.scb.se/Statistik/AM/AM0401/\\_dokument/AM0401\\_BS\\_2012.pdf](http://www.scb.se/Statistik/AM/AM0401/_dokument/AM0401_BS_2012.pdf)

Register-based labour market statistics:

[http://www.scb.se/Statistik/AM/AM0207/\\_dokument/AM0207\\_BS\\_2012.pdf](http://www.scb.se/Statistik/AM/AM0207/_dokument/AM0207_BS_2012.pdf)

Gross pay based on income of statements:

[http://www.scb.se/Statistik/AM/AM0302/\\_dokument/AM0302\\_BS\\_2012.pdf](http://www.scb.se/Statistik/AM/AM0302/_dokument/AM0302_BS_2012.pdf)

Annual accounts for municipal authorities:

[http://www.scb.se/Statistik/OE/OE0107/\\_dokument/OE0107\\_BS\\_2012.pdf](http://www.scb.se/Statistik/OE/OE0107/_dokument/OE0107_BS_2012.pdf)

Balance of payments

[http://www.scb.se/Statistik/FM/FM0001/\\_dokument/FM0001\\_BS\\_2012.pdf](http://www.scb.se/Statistik/FM/FM0001/_dokument/FM0001_BS_2012.pdf)