**Documentation of statistics for
Resource productivity 2016**

1 Introduction

The statistics illustrates how resources are being used in the production. It was published for the first time in January 2015, in cooperation with the Danish Business Authority.

2 Statistical presentation

The statistics on resource productivity provides data on industries and resources used in production and what the resource returns relative to productivity or turnover. Intensities for energy consumption and waste generation are also shown.

The statistics are produced in connection to the Environmental-Economic Accounts for Denmark (Green National Accounts).

2.1 Data description

The statistics are annual and consists of a set of tables, based on customized tabulations of existing statistics - designed to inform analysis of resource productivity.

- The tables RP01 and RP2 are based on the National Accounts and contains data on key economic variables (intermediate consumption, production per intermediate consumption, gross value added per intermediate consumtion) by industry groups as well as commodity groups. In table RP01 the commodity groups are based on HS, harmonized systems - while in RP02, the commodities are grouped by degree of processing (raw materials, intermediate and final goods).
- The table RP03 is a special table based on the statistics on Manufacturers' purchases of goods, with the goods classified according to degree of processing.
- The table RP05 describes the structure of costs for industries, e.g. how much costs for consumption of goods makes up as part of total costs.
- The table RP06 contains energy and waste intensities for industry groups. These are indicators of how much energy is consumed / waste is generated - per unit of production and gross value added.

Detailed information on the statistics used for creating the RP tables are in their respective Documentation of statistics. That is for RP01, RP02, RP05 National Accounts - input, output tables, for RP03 Manufacturers' purchases of goods and services, Accounts statistics for non-agricultural private sector, and for RP06 it is Energy accounts and Waste Accounts.

2.2 Classification system

The classifications used are the same as in the National Accounts, and in the other underlying statistics.

2.3 Sector coverage

Includes all sectors.

2.4 Statistical concepts and definitions

Gross value added: Is calculated as the production less intermediate consumption.

Intermediate consumption: Goods, services and other costs of production. Does not contain compensation of employees and other taxes less subsidies on production.

Cost element: An element of the costs of an enterprise. E.g. purchase of goods, compensation of employees, or taxes on production.

Resource productivity: Resource productivity can be defined as turnover divided by the product.

Resource productivity indicates how much turnover is generated for each price unit used product.

2.5 Statistical unit

Enterprise.

2.6 Statistical population

The population is not the same for the underlying statistics. Detailed information in their respective Documentation of the statistics.

2.7 Reference area

Denmark.

2.8 Time coverage

The individual statistics have different time periods.

The primary source has numbers from 2005 and forward (current year -2).

2.9 Base period

Not relevant for these statistics.

2.10 Unit of measure

The unit of measure is number, million DKK, ton, petajoules and percent depending on the variable and where it is published.

2.11 Reference period

01-01-2016 - 31-12-2016

2.12 Frequency of dissemination

Annual statistics.

2.13 Legal acts and other agreements

The statistics on resource productivity is based on existing data. Data is collected partly by Statistics Denmark and partly by the Environmental Protection Agency.

2.14 Cost and burden

The direct response burden is zero. The data are collected through other statistics.

2.15 Comment

See subject page Green Economy.

3 Statistical processing

The tables are all created from existing statistics in Statistics Denmark.

3.1 Source data

Data from National Accounts, Manufacturers' Purchases of Goods and Services, Accounts Statistics for non-Agricultural Private Sector, Energy Accounts and Waste Accounts.

3.2 Frequency of data collection

Annual - in the underlying statistics.

3.3 Data collection

Collected by retrieving information from registers and other statistics.

3.4 Data validation

Very little separate data validation, data is validated when the underlying statistics are produced.

3.5 Data compilation

The tables are created from combinations of existing statistics.

3.6 Adjustment

Not relevant for these statistics.

4 Relevance

The statistics are co-financed by the Danish Business Authority, which is also one of the main users. The statistics are especially relevant in light of discussion on the circular economy.

4.1 User Needs

The statistics are co-financed by the Danish Business Authority, which is also one of the main users.

4.2 User Satisfaction

No user evaluations have been carried out.

4.3 Data completeness rate

For some industries no detailed figures are published due to confidentiality.

5 Accuracy and reliability

Data are more precise at the aggregated level than in the details. The statistics are very detailed, but the most detailed information must be regarded as estimations, not exact values.

5.1 Overall accuracy

The data are more robust on the more aggregate levels, whereas figures for detailed commodity groups and industry groups must be interpreted with some care. For more information on accuracy and sources of error, please refer to the corresponding sections of the Documentation of Statistics for the underlying statistics. That is for RP01, RP02, RP05 National Accounts - input, output tables, for RP03 Manufacturers' purchases of goods and services, Accounts statistics for non-agricultural private sector, and for RP06 it is Energy accounts and Waste Accounts.

5.2 Sampling error

Not relevant for these statistics.

5.3 Non-sampling error

There is no uncertainty calculations, users are referred to those of the underlying statistics.

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

The statistics are based on special aggregations and calculations from existing statistics. No consolidated quality assessment has been made for this, so users are referred to consult the quality assessments of the statistics used:

National Accounts

Accounts Statistics for non-agricultural private sector

Manufacturers' Purchases of Goods and Services

Energy Accounts

Waste Accounts

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

Revisions follow those of the underlying statistics, see their documentation.

6 Timeliness and punctuality

No delays have been recorded on the publication as announced. The long production time is due to dependency on the National Accounts, which have a long production time.

6.1 Timeliness and time lag - final results

1 year and 7 months, due to dependencies to the National Accounts.

6.2 Punctuality

All publications have been on time.

7 Comparability

Full comparability over time.

7.1 Comparability - geographical

Not relevant for these statistics.

7.2 Comparability over time

The statistics are fully comparable over time.

7.3 Coherence - cross domain

The statistics are customized tabulations of existing statistics. For more information on coherence, refer to the corresponding sections in their respective Documentation of statistics. That is for RP01, RP02, RP05 National Accounts - input, output tables, for RP03 Manufacturers' purchases of goods and services, and for RP06 it is Energy accounts and Waste Accounts.

7.4 Coherence - internal

Not relevant for these statistics.

8 Accessibility and clarity

The statistics are published annually in Statbank Denmark.

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 Calender can be accessed on our English website: Release Calender.

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

Not relevant for these statistics.

8.5 Publications

Not relevant for these statistics.

8.6 On-line database

The statistics are published in the StatBank under the subject Green economy in the following tables:

- RP01: Resource productivity by indicator, industry, product and time
- RP02: Resource productivity by indicator, industry, level of processing and time
- RP03: Manufacturers purchase of goods (per cent of turnover) by industry (DB07), level of processing and time
- RP05: Costs by cost element, industry, price unit and time
- RP06: Energy and waste intensities by indicator, industry and time

8.7 Micro-data access

Researchers and other analysts from authorized research institutions, can be granted access to the underlying micro-data by contacting Research Services.

8.8 Other

Other material only in Danish.

8.9 Confidentiality - policy

Data Confidentiality Policy at Statistics Denmark.

8.10 Confidentiality - data treatment

It has not been necessary to take additional steps to ensure confidentiality of data, than what has already been done in the production and dissemination of in the underlying statistics.

8.11 Documentation on methodology

Not relevant for these statistics.

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 statistics are administratively located in the Division For National Accounts. The responsible for the statistics is Ingeborg Vind, tel. +45 39 17 33 29, e-mail: inv@dst.dk

9.1 Contact organisation

Statistics Denmark

9.2 Contact organisation unit

Statistics Denmark, National Accounts

9.3 Contact name

Ingeborg Vind

9.4 Contact person function

Responsible for the statistics

9.5 Contact mail address

Sejrøgade 11, 2100 Copenhagen

9.6 Contact email address

inv@dst.dk

9.7 Contact phone number

+45 39 17 33 29

9.8 Contact fax number

+45 39 17 39 99