STATISTICS DENMARK

Documentation of statistics for
Maritime Transport over Danish Ports 2024 Quarter 1

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1 Introduction

The purpose of statistics on maritime transport over Danish ports is to describe the volume of and the development in ship traffic to and from Danish ports as well as data on port infrastructure. Also data on accidents on sea on board Danish vessels and in Danish sea territory are published.

The statistics have been compiled in the present form since 1997. Maritime statistics have been produced since 1834 and published annually from about 1900. In the period from 1991 to 1996, Statistics Denmark compiled only summary statistics on the throughput of ports.

2 Statistical presentation

The main variables in the statistics are: Calls at port, type of ship, size of ship, flag state, port of loading/unloading, weight of goods and type of goods and passengers.

The statistics are based on two separate data collections: Maritime traffic on larger Danish ports (quarterly) and Maritime traffic on minor Danish ports (annually). It is supplemented with data from Ferries and Passenger ships (quarterly).

Annual data on accidents at sea are collected from the Danish Maritime Authority.

Data on investments in ports are received from the National Accounts in Statistics Denmark.

2.1 Data description

The statistics contain information on calls at port, type of ship, size of ship, flag state, port of loading/unloading, weight of goods and type of goods and cruise ship passengers.

The larger ports that handles at least 1 mill. tonnes of goods annually report every single port call with detailed information on the vessel, origin or destination port and type of goods. The minor ports reports annual summary information on the number of port calls, tonnes of goods, type of goods and regions. Goods transported by passenger ships and ferries are included in quarterly statistics. Quarterly statistics therefore only contain information on the major ports and ferry ports while annual statistics includes all ports unless otherwise stated.

The statistics are supplemented annually with data on investments in the ports and data on accidents at sea.

2.2 Classification system

Classifications used

- Classification of goods, NST 2007
- Classification of countries, ISO-3166
- EU NUTS classification on regions in EU
- Ports classification, UN/LOCODE

Besides the following groupings are used in various tables:

- Direction: Direction is divided into inbound and outbound goods, where inbound is goods entering the port and outgoing are goods exiting the port
- Type of goods: in accordance with the above mentioned goods classification NST 2007
- Transport unit: the grouping covers units used to contain goods to ease the transport and especially intermodal transport. It is container, ro-ro units (e.g. trailers) and swap bodies
- Groups of countries: In particular the division between European ports and ports outside Europe is used. Within the maritime sector there is a distinction between the short distances (short sea shipping) defined here as transport to and from other European ports and long distances (deep sea shipping) defined here as transports to and from ports outside Europe. The distinction is used because it is by and large two different business areas with different competition, different equipment and often different types of goods.
- Ship unit: in tables SKIB41 and SKIB421 the goods are divided by whether is is transported by merchant vessel or ferries.
- Region of loading or unloading: Division following the geographical classification NUTS

2.3 Sector coverage

Ports.

2.4 Statistical concepts and definitions

Ferry: A passenger ship without cabin accommodation for all or any passengers.

Freight vessel: A ship primarily designed to carry goods.

Gross tonnage (GT): Gross tonnage (GT) is a unitless measure of the size of a ship defined by the volume of all enclosed spaces.

Maritime Transport Statistics: Maritime Transport Statistics is comprised by the two statistics *Goods Transport in Danish Ports* and *Ferry Transport*

Merchant ship: Ship designed for the carriage of goods, transport of passengers or specially fitted out for a specific commercial duty. In maritime transport statistics on vessels that carry goods or transport passengers are included. Fishing vessels are not included.

Nationality of registration (flag state): The country authorising the registry of a seagoing vessel (Flag state)

Passenger ship: A ship designed to carry more than 12 paying passengers. Ro-Ro passenger ships are excluded.

Port: A place with facilities for mechant ships to moor and to load and unload cargo or to diembark or imbark passengers to and from vessel

Port call: Port call with the objective to load or unload goods or disembark or embark passenger

Ro-Ro unit: Wheeled equipment for carrying goods, e.g. a lorry or trailer.

Ship: A seagoing self-propelled surface-displacement vessel.

TEU - Twenty-foot equivalent Unit: TEU is a standardised measure of the number of containers recalculated to units equivalent to a 20 foot container.

2.5 Statistical unit

The statistical unit is the port.

2.6 Statistical population

Danish sea ports

2.7 Reference area

Denmark.

2.8 Time coverage

The quarterly time series for goods and container through-put covers the period from 2000 and forward.

2.9 Base period

Not applicable in this statistics.

2.10 Unit of measure

Used measures

- Passengers in thousands
- Goods in thousand metric tonnes
- Containers i TEU (Twenty-foot Equivalent Units)
- Transport performance in million tonnes-kilometers

2.11 Reference period

The statistics refer to quarters and year.

2.12 Frequency of dissemination

Quarterly (major ports) and annually (minor ports).

2.13 Legal acts and other agreements

The Act on Statistics Denmark (Lov om Danmarks Statistik), Section 8, subsection 1, cf. Order no. 610 of 30 May 2018.

Council Directive 2009/42/EC of May 6th, 2009 on statistical returns in respect of carriage of goods and passengers by sea (Recast).

2.14 Cost and burden

The burden of response for 2013 in fixed 2004-prices are estimated at

- 598,000 DKK on *Maritime transport in major Danish ports*
- 53,000 DKK on *Maritime transport in minor Danish ports*

2.15 Comment

Additional information can be found at the statistics Subject Page.

The COVID19-pandemic haven't had any effect on neither data collection nor the quality of the statistics.

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3 Statistical processing

Annual statistics cover all Danish ports handling goods or passengers. Quarterly statistics cover only major ports.

The statistics are collected through a spreadsheet solution via the data collection portal, http://www.Virk.dk. Response rate is 100 percent.

Data are validated for the correct use of codes and classifications and for internal consistency within each report. Furthermore the development over time is validated at both micro and macro level.

3.1 Source data

The statistics are based on three sources:

- Monthly reports from major Danish ports (with an annual throughput of at least 1 million tonnes of goods) on each port call of freight vessels or cruise ships, cf. information for data providers (in Danish only)
- Annual reports from minor traffic ports on calls of vessels, cruise passengers and throughput of goods, cf. information for data providers (in Danish only)
- Monthly reports from passenger ships and ferry lines on transported vehicles, passengers and goods, cf. separate documentation of statistics and information for data providers (in Danish only)

The tables on investments and on accidents are based on data from respectively the National Accounts and from the Danish Maritime Authority.

3.2 Frequency of data collection

Data are collected monthly from major ports and passenger ships and ferry lines and published quarterly.

Data on minor ports are collected annually and published in conjunction with statistics on major port annually.

3.3 Data collection

Data on both major and minor ports are through the joint public data collection portal, http://www.Virk.dk. Information for data providers are available at Statistics Denmarks website

- Information for data providers for major ports (in Danish only)
- Information for data providers for minor ports (in Danish only)

3.4 Data validation

Collected data are validated for use of correct coding and classification and validated at both micro and macro level for the development compared to previous data.

3.5 Data compilation

Quarterly statistics consists of input from two sources: *Transport in major ports* and 'Transport by Passenger and ferry lines*. From the latter only the goods transport on ferries are included.

Both statistics are compiled with the same detail except goods classification. All goods from ferry transport are classified as *Ferry goods*.

Data are checked for doublets on both port calls and goods transactions. Negative data lines that neutralizes erroneous data lines are handled.

In some cases the weight of goods in ferry transport are imputed based on the number of transported goods vehicles. It is the case when the data provider have no information on the weight of goods but only on the number of goods vehicles. The imputation is based on reports where all information is provided.

No enumeration is done since the coverage of the quarterly statistics is defined as ports with annual through-put of at least 1 mill. tonnes and all these ports report. The annual statistics has complete coverage for all ports.

3.6 Adjustment

Adjustments are made in the type of vessel if the reported type is contradictory to the type of goods.

4 Relevance

The statistics are used by the ports themselves, Eurostat and other parts of the EU-commission, ministries, organisations, researchers and in general to monitor the goods transport activity in Danish ports and to develop transport statistics.

4.1 User Needs

A main user is Eurostat and other parts of the EU-commission that gathers similar statistics from all EU- and EFTA members to analyse and develop a common transport policy. Other primary users are Danish ministries that uses the statistics as background for and to develop transport policies. In the private sector the statistics are used by maritime enterprises and ports, trade organisations as well as consultancies and analytical companies for various analyses of the transport of goods through Danish ports.

4.2 User Satisfaction

User satisfaction is not monitored systematically and feedback from users is rare.

4.3 Data completeness rate

The statistics fulfill all requirements and guidelines agreed upon in unison between Eurostat and Member states. The regulation based statistics cover maritime goods and passenger transport and maritime accidents.

Besides the regulation based statistics Statistics Denmark produces tables on investments in ports. The investments are part of National Accounts calculations and does not add to the report burden of enterprises.

5 Accuracy and reliability

Maritime statistics are based on censuses among all goods handling ports. The majority of data stems from the quarterly reports from all major ports. The data from the remaining minor ports are summarised annual data. On the main variables there is full coverage and accurate within 3 percent. Minor revision occur without systematic bias.

5.1 Overall accuracy

The statistics are for the most part based on monthly reports on individual port calls in the major ports and for the remaining on annually summary data. On the main variables coverage is 100 percent.

Accuracy on the main variables is assessed within 3 percent, i.e. the true amount of handled goods is within +/- 3 percent interval of the published data.

5.2 Sampling error

Not relevant for these statistics.

Annual statistics is based on a census of goods transport in the Danish ports with complete data from all ports and ferry lines. There is thus no sampling error on the annual statistics.

In the quarterly statistics data is reported from all population consisting of ports with a cutt-off on goods through-put on 1 mill. tonnes annually. It is not a sample and there is therefore no sampling error.

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5.3 Non-sampling error

Compilation of statistics by flag state, and by country of loading/unloading are only based on reports from the major ports. In 2012 those ports had 83 percent of the goods unloaded, 89 percent of the goods loaded and 76 percent of the port calls of cargo ships in Danish ports. On the variables weight of goods and (national) tonne-kilometers the coverage is close to 100 percent.

Occasionally port calls with goods occur on the smallest ports not included at all. It is assessed to be of very modest extent.

There are no sampling errors as the statistics are compiled on the basis of censuses.

Measuring errors might occur in the parts of the statistics that ports collects only for statistics use, i.e. type of vessel, type of goods and ports of origin and destination.

In ferry goods a calculation error can occur when imputing weight of goods in cases where only the number of goods vehicles are reported.

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 overall quality assessment is high. The coverage is high with 100 percent response rate and very few data revisions.

On the main variables, amount of goods and national transport performance (tonnes-km) the quality is high and fully covered.

To the extent that small ports without regular goods transport occasionally handles goods, the statistics is underestimated. Based on information from partner ports in Denmark, at least some transactions with the smallest ports can be identified and the underestimation is assessed to be less than 0.1 percent of total tonnes handled.

On specific variables accuracy is less due to the ports limited access to information on type of goods, type of vessel and ports of origin and destination.

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 published and revisions occur. Figures are revised 4-8 quarters back in connection to the quarterly disseminations.

Revisions are usually of minor significance.

6 Timeliness and punctuality

Statistics are usually published around 70 days after the end of a quarter. Annual statistics are published around 130 days after the end of reference year. It is always published at the preannounced time.

6.1 Timeliness and time lag - final results

The statistics are published quarterly and annually. The publishing time for quarterly statistics is around 55 days after the end of reference quarter.

6.2 Punctuality

Since 1st quarter 2013 the statistics has been published without delays compared to the preannounced time of dissemination.

7 Comparability

The statistics are consistent from 2000 and onwards and directly comparable to similar statistics from other EU and EFTA member states.

7.1 Comparability - geographical

Eurostat publishes comparable statistics for Europe collected within the EU and EFTA member states.

7.2 Comparability over time

The statistics for the key variables are fully comparable with the previous statistics on throughput in ports.

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7.3 Coherence - cross domain

Comparable statistics are not available.

Statistics on *Passenger ships and Ferry lines* are related since it contains passenger transport by sea vessel and goods transport by ferries.

Prior to 1997 the Port Database within the Ministry of Transport contained similar statistics with few deviations due to methodological and classification differences.

7.4 Coherence - internal

Data stems from different sources where two (*Maritime transport on major ports* and *Maritime transport on minor ports*) are mutual exclusive, i.e. a port is only included in one of the statistics and all ports is included in one of the statistics. The third source, *Passenger and ferry transport* covers ferry lines and not ports. Data from this statistics covers therefore activity already included in one of the other statistics, Passenger vessels and ferries covered in *Passenger and Ferry transport* are therefore exempted from the two ports statistics.

8 Accessibility and clarity

Maritime statistics are published annually in Nyt fra Danmarks Statistik (Statistical News).

Quarterly and annually data can be found in http://www.Statbank.dk.

Annual tables are published in Statistical Yearbook until 2017 and Statistical 10-year Review.

8.1 Release calendar

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

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.

8.2 Release calendar access

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

8.4 News release

The statistics are published annually in Nyt fra Danmarks Statistik (in Danish only).

8.5 Publications

Maritime transport are published together with other transport statistics in *Statistical Yearbook*, that was published until and including 2017 and *Statistical Ten-Year Review*.

8.6 On-line database

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The statistics is available in the online database, https://www.Statbank.dk.

Statistics of goods throughput is published under the topic **Business sectors, Transport, Transport of goods by ship**, with quarterly figures in the following tables:

- SKIB72: Throughput of goods in major Danish seaport by seaport, direction, type of goods and time
- SKIB73: Throughput of containers and ro-ro units in major Danish seaports by direction, unit of cargo, transport unit and time
- SKIB74: Throughput of goods in major Danish seaports by group of countries, type of goods and time

Under the same topic the following tables contains annual figures:

- SKIB41: Transport of goods over Danish ports by unit and time
- SKIB421: Throughput of goods in Danish ports by seaport, unit and time
- SKIB431: Throughput of goods in Danish ports in international traffic by seaport, direction, type of goods and time
- SKIB44: Throughput of goods in international traffic in major Danish ports by seaport, direction, country and time
- SKIB451: Throughput of goods in Danish ports in national traffic by seaport, direction, type of goods and time
- SKIB461: Throughput of goods in national traffic in Danish ports by seaport, direction, part of the country and time
- SKIB47: Throughput of goods from cargo ships in major Danish ports by flagstate, direction, type of goods and time
- SKIB481: Maritime transport of goods between Danish regions by region of loading, region of unloading, unit and time
- SKIB49: Throughput of containers and ro-ro units in major Danish ports by seaport, direction, unit of cargo, unit and time
- SKIB50: Throughput of goods in major Danish ports by direction, country, type of goods and time

Statistics on vessel traffic in Danish ports can be found under the topic **Business sectors, Transport, Traffic**, with annual figure in the following tables:

- SKIB21: Call of cargo vessels on major ports by flagstate, type of vessel, unit and time
- SKIB221: Call of vessels on Danish ports by seaport, type of vessel, gross tonnage (GT) and time
- SKIB23: Call of cargo ships and cruiser ships on major Danish ports by seaport, type of vessel and time

Statistics on port infrastructure can be found under the topic **Geography, environment and energy, Infrastructure, Harbours**, with annual figures in the following tables:

- SKIB101: Call of vessels, passengers and throughput of goods in traffic ports by seaport, unit and time
- SKIB2: Investment in seaports by price unit, type of investment and time

Information on accidents at sea can be found under the topic **Living conditions, Traffic accidents, Traffic accidents involving trains and ships**, where annual figures can be found in the following tables:

- SKIB92: Accidents at sea involving Danish vessels by type of accident, extent and time

- SKIB93: Accidents and fatalities onboard Danish vessels Danish ships by type of vessel, accidents and time
- SKIB94: Accidents at sea in Danish sea territory by type of accident, waters, extent and time

Information on cruiser ships can be found under the topic **Business sectors, Transport, Passenger transport**, where annual figures can be found in the following table:

- SKIB35: Cruiser ships in Danish ports by seaport, unit and time

8.7 Micro-data access

For the major ports the database contains the reported information per port call. Data are available from 1997.

- For the period 1991-1996, summary annual port data are stored in the database on annual basis.
- From 1997 the reported summary data from minor ports are stored in the database on annual basis.
- From 1992 all reported variables concerning passenger ships and ferries are stored in the database.

Access to micro-data is possible through Statistics Denmarks Research Services.

8.8 Other

The statistics are published at the website of Eurostat.

The micro-data are made available for paid customized statistics. Read more on customized solutions or get more information from DST Consulting.

8.9 Confidentiality - policy

Statistics Denmark's Data Confidentiality Policy is applied.

8.10 Confidentiality - data treatment

At the level of goods and passenger transport by port or ferry route, data are not confidential since the data are considered publically available.

8.11 Documentation on methodology

Additional methodology descriptions can be found in Eurostats *Reference Manual on Maritime Transport 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 administrative placement of these statistics are in the division of Short term statistics. Contact person is Heidi Sørensen, tel.: +45 39 17 35 62, e-mail: hsn@dst.dk

9.1 Contact organisation

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