STATISTICS DENMARK

Documentation of statistics for Rail Transport 2024

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1 Introduction

Rail transport statistics covers transport of goods and passengers by rail, investments in rail infrastructure and vehicles, rail traffic and accidents. The statistics is used for policy work in the EU and is compliant with the EU-regulation on the topic which secures that it can be compared to other EU-countries. Furthermore it is used by others with interest in the railroad sector this includes government bodies.

2 Statistical presentation

Rail transport statistics contains information passenger and goods transport on Danish rail network irrespective of the nationality of the operator on a quarterly basis. On a yearly basis the statistics contains information on railway infrastructure and rolling vehicle stock, investments in infrastructure and rolling vehicles, and rail accidents.

2.1 Data description

Rail transport statistics contain information on

- *Passenger and goods transport by rail*: the number of passenger and weight and type of goods
- *Railway infrastructure and rolling vehicle stock*: the length of rails and network characteristics, e.g. interlocking or train stops, and number of locomotives and wagons
- *Investments in railway infrastructure and rolling vehicles*: Investments in rail network and service buildings etc. and investments in locomotives and wagons
- *Rail Accidents by type *

The statistics on freight transport are divided into the transport types national and international transport as well as transit transport. The statistics are also broken down by train type, track length and carriage type.

2.2 Classification system

Classifications specified in the EU legislation are used. Primarily it is the classification of the type of goods according to the Standard goods classification for transport statistics (NST 2007) and the classification on dangerous goods.

The statistics are distributed geographically by country and region according to the classification on Regions, provinces and municipalities.

2.3 Sector coverage

Rail transport in Denmark incl. S-trains, Metro and Light rail.

2.4 Statistical concepts and definitions

Container: A container is a specialized box for transporting goods, sturdy and stackable, capable of being moved horizontally and vertically.

Goods transport performance: A measure of the transport production. Unit of measurement of goods transport which represents the transport of one tonne of goods over a distance of one kilometre.

Speed and train stop control: Safety system, capable of automatically decelerating the train should it exceed the speed limit, and ensuring the train halts at red signals.

Intermodal transport unit: Intermodal transport unit (e.g. container unit) used for any given transport of goods.

Passenger transport performance: Unit of measurement representing the transport of the total distance travelled of all passengers.

Semi-trailer (unaccompanied): A semi-trailer is a vehicle designed for transporting goods. The semi-trailer is specifically constructed to be pulled by a tractor unit. It lacks a front axle and is designed so that a portion of the vehicle and a significant part of the cargo weight rest on the tractor unit. In a semi-trailer train, the semi-trailer is coupled with a tractor unit. When a semi-trailer is transported unaccompanied, it is transported without the tractor unit, and therefore without a driver.

Centralised traffic control: System that centrally controls traffic flow and track switching.

Train: A locomotive or tractive vehicle combined with passenger or goods wagon. One or several coupled trainsets are considered a train. A tractive vehicle (locomotive) alone is not a train.

Rail passenger: Any person, both paying and non-paying, undertaking a journey by railway. Railway personnel on duty are not included.

Trainset: An indivisible block of railcar(s) and railcar trailer(s) or locomotives(s) and passenger railway vehicle(s).

Traffic performance: Concept used to measure and compare traffic activity. Indicates the distance traveled by the transport unit in kilometers. For rail transport, the unit of measurement is train kilometers, and for road transport, the unit of measurement is vehicle kilometers.

Swap body: Transport unit that is sturdy enough for repeated use but not for being lifted by the superstructure or for being stacked with cargo. It is designed for intermodal transport where at least one stage involves road transport.

2.5 Statistical unit

The unit used in dissemination is the rail network.

2.6 Statistical population

Operators and infrastructure management on the Danish rail network.

2.7 Reference area

Denmark.

2.8 Time coverage

Few of the time series starts in 1990. Then from 2006 and onwards more time series has been added due to demands from the EU-regulation.

2.9 Base period

Not relevant for this statistics.

2.10 Unit of measure

- Passenger transport in number of persons and in passenger-kilometer (number of passengers times performed distance, passenger-km)
- Goods transport in tonnes and tonnes-kilometer (tonnes times performed km)
- vehicle kilometer in vehicle-km (train times performed km)
- Investments in DKK (Danish Kroner) in current and fixed prices
- Length of rail network in kilometers
- Train traffic in number of trains
- Rolling stock in number of train sets
- Capacity in number of seats (for passenger trains) or carrying capacity (for goods trains)
- Accidents in persons

2.11 Reference period

Quarter or calendar year.

2.12 Frequency of dissemination

Goods and passenger transport are compiled quarterly. Other parts of the statistics are compiled annually.

2.13 Legal acts and other agreements

Data collection is authorised by the Law on Statistics Denmark, section 8, cf. order no. 610 of 30 May 2018.

Statistics on rail transport are compiled according to European Parliament and Council regulation 2018/643 of 18 April 2018 on Statistics on railway transport.

2.14 Cost and burden

The administrative burden on reporting enterprises are very low.

2.15 Comment

Additional information can be found at the statistic's subject page.

3 Statistical processing

Data for the statistics are collected through the online data collection portal,Virk.dk quarterly from all rail operators with transport on the Danish rail network including private railways and light rail lines. Data are validated with regard to internal consistency in the report and the development in the time series on both micro (enterprise) and macro (aggregated statistics) level. No imputation (the statistics are only published when all data is collected), enumeration or seasonally adjustment are done.

3.1 Source data

The data source for passenger and goods data is questionnaires to train operators including private railways and light rail lines. The data source for investments is partly the train operators and partly infrastructure managers. Other data sources are the Danish Transport Agency. .

3.2 Frequency of data collection

Passenger and goods data are collected quarterly. Other data are collected annually.

3.3 Data collection

Data from train operators and infrastructure managers are collected through a so-called upload solution via the public data collection portal, Virk.dk.

Data from other public authorities are in some cases collected through e-mails.

3.4 Data validation

In each report, validation consists of

- **Internal consistency check**: Data are checked for internal consistency, i.e. coherence between different related pieces of information within the questionnaire, e.g. with reported number of passengers, passenger-km should also be filled.
- **Development**: The development in the times series for each data provider in particular from previous quarter and from the same quarter last year are checked in order to detect erroneous reports or get explanations on unusual events.

This can lead to contact of the reporting company for getting more correct data.

The compiled statistics are checked for **Development**: The development in the time series in particular from previous quarter and from the same quarter last year are checked in order to detect erroneous reports or get explanations on unusual events.

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3.5 Data compilation

No additional data compilation are done besides data validation which can lead to corrections. There is no need for imputation (there is no missing data) or enumeration since data collection covers the full population and is complete.

3.6 Adjustment

No seasonally adjustments are made..

4 Relevance

The statistics are used widely by e.g. news media, ministries and consultancies, and it is the impression that the statistics is of relevance to the users.

The statistics are primarily used by EU for policy work but also other with interest on the subject uses it. This includes government bodies.

4.1 User Needs

Primary users are the European Commission and Danish ministries that use the data for policy making and assessment; the industry associations and enterprises that use data to analyse the development of the sector and research institutes that use the statistics for analyses and research into the transport sector.

4.2 User Satisfaction

Contact to users is done through a committee with representatives from major institutional users of transport statistics.

4.3 Data completeness rate

The statistics covers all activities on the Danish rail network in accordance with the EU-regulation.

5 Accuracy and reliability

Uncertainty is estimated to be relative small since data collection covers all enterprises operating trains on the Danish rail network.

Only minor revisions are done to the first preliminary publication.

5.1 Overall accuracy

No quality measurement of the statistics has been carried out.

The main uncertainty is within passenger transport that is based on the passenger models of the operators in which besides sold tickets, passengers with season tickets and passengers without tickets are estimated as well.

There is no reason to believe that there is systematic bias in the statistics since all operators are reporting.

5.2 Sampling error

Not relevant to this statistics.

5.3 Non-sampling error

The only source of uncertainty is errors in the reports. However, there is no reason to believe that there should be systematic errors in the reports.

Passenger transport have larger uncertainty than goods transport since the statistics for passenger transport are based on the companies' models of total number of passengers.

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 quality is assessed to be high since all operators are included in the survey with a response rate of 100 percent. There is no need for imputation or enumeration.

Information on investments is assessed to be of very quality as the information originates from the financial statements of the enterprises.

Transport of goods are assessed to be of high quality. No major revisions are made and there is no bias in the revisions made.

Passenger transport are of good quality. In this area higher uncertainty exists since data are based on the passenger models of the operators that is based on ticket sale, sale of season ticket, ticket inspections and passenger counts. The models estimates all types of passengers including passengers without tickets. Data are often revised. No bias seems to be present.

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

The statistics are revised for 8 quarters in connection to dissemination of new quarters. The revisions are due to revised figures from the operator.

In connection to major revisions of the passenger models, major revisions in data older than two years can occur occasional.

6 Timeliness and punctuality

The statistics are published 73-74 days after the reference period.

The statistics are always published at the pre-announced time.

6.1 Timeliness and time lag - final results

The publication time for the quarterly publications is approx. 75 days, which only contains general data for passenger and goods transport. The publication of 4. quarter will contain a first bid for total passenger and freight transport. The more detailed annual publication is published after approx. 8 months.

6.2 Punctuality

Punctuality is high. The statistics have been published at the pre-announced time from data for 1st quarter 2013 and forward.

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7 Comparability

Comparable time series for all EU-member states and EFTA-member states are published by Eurostat.

There is no significant breaks in the existing time series. The time series for personkilometres for the Metro has a minor break between 2016 and 2017 due to changes in methodology.

7.1 Comparability - geographical

The statistics are published in the same way by countries within EU, EFTA and EU-candidate countries and Eurostat publishes comparable figures.

Main aggregates provided to Eurostat for the purposes of EU Regulation 2018/643 or joint questionnaire Eurostat/International Transport Forum (ITF)/United Nations Economic Commission for Europe (UNECE) on land transport statistics can be found in tables BANE31 (rail traffic), BANE25 (rail passenger transport) and BANE1 (rail transport of goods) mediated by, among others, Statistics Denmark.

7.2 Comparability over time

The statistics are generally comparable over time and have been compiled since 1990 and in its current form since 2006.

The Metro opened the 19th of October 2002. By the end of the third quarter of 2019 opened the M3 line.

First part of the Light Rail in Aarhus opened the 21st of December 2017 and fully finished 30th of April 2019.

Nordjyske Jernbaner started operating all trains in Northern part of Jutland in 2017. This means that there is a move from "Network managed by Banestyrelsen" to "Other Railway Networks".

The time series for personkilometres for the Metro has a minor break between 2016 and 2017 due to a change in the methodology for calculating journey lengths used for the calculation of personkilometres.

7.3 Coherence - cross domain

Annual statistics are directly comparable with the quarterly figures.

7.4 Coherence - internal

Not relevant to this statistics.

8 Accessibility and clarity

The statistics are published yearly in Nyt fra Danmarks Statistik (Statistical news) , and all data is available in the online database of Statistics Denmark, https://www.Statbank.dk.

Selected series are publish in Statistical Ten-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 in [New from Statistics Denmark (Nyt fra Danmarks Statistik)] (https://www.dst.dk/da/statistik/nyheder-analyser-publ/nyt?psi=1652 (in Danish only).

8.5 Publications

Goods and passenger transport by rail together with other transport statistics are included in tables in *Statistical Yearbook* and *Statistisk Tiårsoversigt (Statistical 10-year review)* (In Danish only).

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8.6 On-line database

These statistics are published in the StatBank in the following tables:

Passenger transport

- BANE21: Rail transport of passengers by unit and type of transport
- BANE22: International rail transport of passengers to and from Denmark by country
- BANE25: Rail transport of passengers by unit and type of transport

Transport of goods by train

- BANE1: Rail transport of goods by unit, type of transport and railway system
- BANE201: Rail transport of goods by unit, type of transport and type of goods
- BANE3: International rail transport of goods by direction, unit, country and time
- BANE401: National rail transport of goods by unit, region of loading and region of unloading
- BANE5: Rail transport of dangerous goods by type of transport, type of goods and unit
- BANE6: Railway transport of intermodal transport units by type of transport, unit of cargo and unit
- BANE9A: Rail transport of goods by unit and type of transport

Railway network

- BANE41: Railway network 1st January by railway system and unit
- BANE42: Investments in railway network by type of investment and unit

Traffic

- BANE31: Rail traffic by type of transport
- BANE32: Train traffic on a work day by section of the line and unit

Transport equipment

- BANE51: Railways' rolling stock 1st January by type of rolling stock
- BANE52: Seats and load capacity in railway vehicles 1st January by type of railway vehicle and unit
- BANE53: Investments in railways' rolling stock by type of investment and unit

Traffic accidents involving trains

- BANE91: Fatalities and injuries in railway traffic accidents by railway system, category of person and casualty
- BANE92: Fatalities and injuries in railway traffic accidents by railway system, type of accident and casualty

8.7 Micro-data access

Researchers and other analytics from authorized research institutes, may apply for access to the statistics micro-data with Danish Statistics' research program Data for research. Only Danish research environments are granted authorization. Foreign researchers can, however, get access to micro-data through an affiliation to a Danish authorized environment. . A similar research program is available for Danish state departments, agencies and directorates.

8.8 Other

Data on passenger and goods transport are provided to and published in Eurostat's database.

8.9 Confidentiality - policy

The general rules of confidentiality of Statistics Denmark are applied

8.10 Confidentiality - data treatment

The statistics follows the general policy for Data confidentiality by Statistics Denmark. Since all operators and infrastructure managers solve tasks according to concluded operating agreements, there is no discretion.

8.11 Documentation on methodology

The guidelines of Eurostat for Rail transport statistics, which describes how the individual variables must be collected.

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 is in the division of Short Term Statistics. The contact person is Mathias Dybdahl Bluhme, tel.: + 45 4022 5637, and e-mail: MDB@dst.dk.