

**Documentation of statistics for
International Trade in Services by Enterprise Characteristics
2022**

1 Introduction

The purpose of Trade in Services by Enterprise Characteristics (STEC) is to describe enterprises engaging in international trade in services, how large they are, which economic sector they belong to, how many countries they trade with etc. These statistics have been compiled since 2014 and are comparable until 2018 for legal units. From 2019 and onwards the statistics have been compiled on the basis of the enterprise unit.

2 Statistical presentation

Trade in Services by Enterprise Characteristics is an annual measurement of enterprises involved in international trade in services and their characteristics, stated in value. The statistics are grouped by economic activity, enterprise size, ownership and type of services.

2.1 Data description

Trade in Services by Enterprise Characteristics (STEC) is an annual measurement of enterprises involved in international trade in services and their characteristics, stated in value. The statistics are grouped by economic activity, enterprise size, ownership and type of services.

2.2 Classification system

Type of services: The service items in STEC follow the service nomenclature EBOPS2010 (Extended Balance of Payments Services) which is defined in Manual on Statistics of International Trade in Services (MSITS), issued by UN in 2010.

2.3 Sector coverage

There is no sector limits in STEC.

2.4 Statistical concepts and definitions

Residence: An enterprise is considered resident if it intends to have activity related the production of goods and services within the economy for at least a year. This means that affiliates and branches controlled by foreign enterprises within Denmark are considered Danish residents.

Number of employees: The number of employees refers to the number of persons who work for an employer and who have a contract of employment and receive compensation. A worker is considered to be a wage or salary earner of a particular unit if he receives a wage or salary from the unit regardless of where the work is done (in or outside the production unit). According to the Business Register Regulation, the intention is to use the situation at the end of the year. However, as the end date approach is not harmonized the annual average can also be used as reference.

Ownership: The ultimate owner: The statistics are defining a company's ownership attached to the ultimate owner who has control over the company, i.e. have the ability to determine a company's consult the general policy, if necessary by selecting a board. The controlling unit is the ultimate owner and holds, directly or indirectly, more than 50 pct. of equity or shareholders' voting rights. The ultimate owner must be understood in relation to the direct owner, since a company can immediately be owned (directly) from a country, even if it ultimately is the owned in another country. For more information see the [documentation for the statistics on foreign owned enterprises](#)

2.5 Statistical unit

The main statistical unit is an enterprise, defined as a legal unit until 2018 and as an enterprise unit from 2019 and onwards. However, since STEC is based on the international trade in services statistics (ITSS), a number of sources, other than enterprises, are included, and therefore not all trade can be attributed to the statistical unit. An enterprise can be used to collect parts of a complex company across e.g. legal units. Enterprises can be formed if it is assessed that they will provide more correct statistics. Before 2019 International Trade in Services by Enterprise characteristics used the legal unit as the statistical unit. Thus the legal unit defined the characteristic of the enterprise e.g. economic sector. Enterprises include all parts of the production process that a company has directly or indirectly ownership of. Thus, processes which have been separated in different companies, for historical or legal reasons, will be consolidated to one enterprise. For many small companies there will be no need to consolidate to enterprises and their enterprise will correspond to the legal unit. A change in the EU-legislation was the reason behind the change to enterprises as this will result in more correctly measuring the activity of the companies. Enterprises have been formed for the large and statistically most important companies.

2.6 Statistical population

The ITSS and thus the STEC cover all service transactions between residents and non-residents. One of the main sources for the ITSS is the ITS survey, which is a sample survey drawn from a population of around 50.000 (legal) units. The population (~50.000 legal units) is defined by using the statistical business register, SBS statistics and VAT reports on trade in services with other EU countries.

2.7 Reference area

STEC cover all international trade between Danish residents and non-residents.

2.8 Time coverage

The statistics annually covers the period from 2014 to 2018 for legal units. From 2019 and onwards the statistics cover enterprises.

2.9 Base period

Not relevant for these statistics.

2.10 Unit of measure

The statistics are disseminated in mill. DKK

2.11 Reference period

It is an annual statistic which follows the calendar year.

2.12 Frequency of dissemination

This statistics are disseminated annually.

2.13 Legal acts and other agreements

Not relevant for these statistics as they are a combination of individual statistics. The individual statistics all have their own legal agreements. For more information, see the documentation for the respective statistics.

2.14 Cost and burden

Not relevant for these statistics as they are based on already collected data.

2.15 Comment

Further information can be found by contacting Statistics Denmark directly.

3 Statistical processing

These statistics are compiled by combining data for International Trade in services (ITSS) with Business statistics. Data is validated by comparing data with the sources used for compiling the statistics and by comparing the different tables compiled in this statistic.

3.1 Source data

The sources used to compile the statistics are International Trade in Services Statistics (ITSS), the Business Register, the statistics for foreign owned enterprises (IFATS) and the statistics for Danish Foreign affiliates (OFATS).

3.2 Frequency of data collection

Annually information is collected from International Trade in Service Statistics (ITSS), the Business Register, the statistics for foreign owned enterprises (IFATS) and the statistics for Danish Foreign affiliates (OFATS).

3.3 Data collection

The statistics are based on information from other statistical domains. This information is combined to form an independent statistic.

3.4 Data validation

The total International Trade and total trade on service codes is compared between International Trade in Service Statistics and International Trade in Service by Enterprise Characteristics statistics to ensure consistency. Also the total trade on economic sectors, service type etc. is compared between tables in international trade in service by enterprise characteristics, to ensure internal consistency within this domain.

3.5 Data compilation

ITSS is mainly based on a sample survey (ITS survey) where around 2.935 units are surveyed, representing the full population of around 50.000 units. The grossing up procedure is fully dynamic and recalculated for each production cycle. Around 325 units are reporting monthly and are only representing themselves in the statistics, and around 2.600 is surveyed quarterly and represents the rest of the enterprises in the population. The directly reported trade cover more 90 pct. of the total trade from the ITS survey. Through a common ID-variable data from the Business register, ITSS, IFATS and OFATS are linked. The information from all these statistics are then used to form a variety of tables which can be found in the statbank. If a link cannot be established between the data sources, the enterprise in question will be a part of the group unknown for business related variables. In addition only directly reported trade is linked with the business statistics, and thus the grossed up figures, which cannot be directly linked to an enterprise, are a part of the unknown. If information about affiliates (IFATS and OFATS) is not available for the present year, the latest available year will be used to compile the statistics.

3.6 Adjustment

Not measured.

4 Relevance

STEC is relevant for analysts and enterprises, for analyses of e.g. globalization and enterprises which contribute to the international trade in services in Denmark.

4.1 User Needs

Trade in Services by enterprise characteristics (STEC) is created due to a rising demand from users to be able to add more details to the traditional international trade in services statistics. STEC gives the users better knowledge about the enterprises which have international trade in services and can be used to e.g. analyze the consequences of globalization.

4.2 User Satisfaction

There are no user satisfaction surveys done for these statistics.

4.3 Data completeness rate

There can be data which cannot be published due to confidentiality policies.

5 Accuracy and reliability

The accuracy for International Trade in Service by Enterprise Characteristics is closely related to the accuracy of International Trade in Service Statistics which is high on an aggregated level. The revisions follow the revision structure of International Trade in Service Statistics.

5.1 Overall accuracy

Based on the sources for this statistics the overall accuracy is considered high for these statistics. There is a higher uncertainty related to the latest published year, since some sources are still being validated, while others have been subject to imputation. The uncertainty related to STEC is highly related to the uncertainty for ITSS. On the aggregated level ITSS is accurate, due to the large share of the trade that is directly reported, but on more detailed service items levels, the variance of the uncertainty is larger, mainly due sampling error.

5.2 Sampling error

The sampling error for the ITS survey is calculated with a CV value of the 0,6 pct. for exports and 0,8 pct. for imports.

5.3 Non-sampling error

Other uncertainty can be related to the sources of the statistics. The main source is International Trade in Services where an important element of inaccuracy is attached to the frame from which the sample is drawn. The frame was first derived from the settlement statistics of Danmarks Nationalbank, which was abolished in 2004. This frame was in effect from 2009 to 2022, where the frame was delimited from Business register and special screening survey every fifth year. From reference year 2023 and onwards, the frame changes to a yearly survey with a larger screening with the purpose of reducing revisions. Finally it must be considered that the concepts being employed in the statistics are rather complicated. Accordingly misunderstandings in the reports leading to inaccurate compilations are unavoidable. This problem is constantly addressed by contacting the reporters when suspicions of misunderstandings are raised. Special analyses have been conducted on the items sea transport, travel, insurance, merchanting, government services (n.i.e.), construction services, and services between affiliated enterprises (n.i.e.) and most lately on intellectual property services. The travel item entails some difficulty, especially travel debits. It is compiled using different information on consumption by Danes abroad, number of nights abroad, and transport abroad from statistics from other countries; but the risk of error is fairly big, particularly concerning small partner countries. This error margin can, however not be calculated. Further information on the accuracy of ITSS can be found in the dissemination report for ITSS: [Dissemination report for international trade in services 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

STEC is of high quality. It is relevant for our users as it covers user needs which have not previously been met. These statistics are also consistent and comparable over time. The quality is as good as the sources used for compiling. For more information on the sources see the documentation of statistics for International Trade in Services, foreign owned enterprises and foreign affiliates abroad.

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

These statistics are revised by each publication date for the latest 2 year. This follows the revision policy of International Trade in Services and National Accounts.

6 Timeliness and punctuality

These statistics are published 10 months after the reference period. They are published without any delays.

6.1 Timeliness and time lag - final results

These statistics are published 10 months after the reference period. Final numbers follows the revision policy of national accounts and is thus disseminated two years and ten months after the reference period.

6.2 Punctuality

These statistics are published without any delays in relation to the publication date announced in the release calendar.

7 Comparability

STEC have been compiled since 2017 but is comparable from 2014 to 2018 for legal units. From 2019 the statistics have been compiled using the enterprise unit. The data is fully comparable with compiled services in the ITSS and Balance of payments statistics. Comparability with other statistics, such as the business statistics can be limited due to different coverages.

7.1 Comparability - geographical

These statistics are compiled according to common European, [Service Trade by Enterprise Characteristics guidelines](#) published and are therefore comparable with statistics from other countries published by Eurostat.

7.2 Comparability over time

These statistics are comparable from 2014 to 2018 and again from 2019 and onwards.

7.3 Coherence - cross domain

STEC is fully comparable with the compiled services in the ITSS and Balance of payments statistics. Comparability with other statistics, such as the business statistics can be limited due to different coverage.

7.4 Coherence - internal

STEC is fully comparable with the compiled services in the ITSS and Balance of payments statistics.

8 Accessibility and clarity

These statistics are published annually in a Danish press release, at the same time as the tables are updated in the StatBank. In the StatBank, these statistics can be found under the subject [International Trade in Services](#). The statistics can also be found in various publications and analysis.

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

8.4 News release

STEC is published together with the Trade in goods by enterprise characteristics (TEC) annually in a Danish press release.

8.5 Publications

The statistics can be found in various annual publications and analyses published by Statistics Denmark.

8.6 On-line database

The statistics are published in the StatBank under the subjects in the following tables: - [STEC01](#): Trade in services by enterprise characteristics by imports and exports, enterprise size, industry and time - [STEC02](#): Trade in services by enterprise characteristics by imports and exports, ownership, industry and time - [DKSTEC06](#): Trade in services by enterprise characteristics by imports and exports, industry, items and time

The following tables prior to 2023 are still available in the StatBank: - [DKSTEC1](#): Trade in services by enterprise characteristics by imports and exports, enterprise size, items and time - [DKSTEC2](#): Trade in services by enterprise characteristics by imports and exports, ownership, items and time - [DKSTEC6](#): Trade in services by enterprise characteristics by imports and exports, industry, items and time - [DKSTEC1](#): Trade in services by enterprise characteristics by imports and exports, enterprise size, items and time - [DKSTEC2](#): Trade in services by enterprise characteristics by imports and exports, ownership, items and time - [DKSTEC6](#): Trade in services by enterprise characteristics by imports and exports, industry, items and time

8.7 Micro-data access

Researchers and other analysts from authorized research institutions can be granted access to microdata for the enterprises reporting to the ITS survey by contacting the [Research Services division](#).

8.8 Other

Not relevant for these statistics.

8.9 Confidentiality - policy

These statistics follows the [data confidentiality](#) of Statistics Denmark.

8.10 Confidentiality - data treatment

These statistics follow an active confidentiality policy. For a cell to be published, it must contain more than 2 enterprises, and the two largest enterprises must altogether not hold more than 85% of the total value in the cell.

8.11 Documentation on methodology

The statistics follow the guidelines developed by Eurostats Taskforce on Service Trade by Enterprise characteristics.

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 External Economy. The contact person is Søren Burman, tel.: + 45 3051 4562, and e-mail: SBU@dst.dk.