

**Documentation of statistics for
Educational expenditure (UOE Finance) 2019**

1 Introduction

The purpose of the statistics on education finance is to show, how the Danish educational system is financed across sources and which expenditure types are used within the production of education. The statistics are further divided by education level. The statistics are based on international standards for education expenditures (UOE data collection on formal education) and is used as an input to the OECD's publication *Education at a Glance*. *Education at a Glance* compares educational systems across countries. The statistics are developed from finance year 2016 onwards and statistically comparable throughout the entire period.

2 Statistical presentation

Education finance is an annually publication of the financing of the Danish educational system along with associated types of expenditures. The statistics is calculated in DKK millions and divided across financing sources, expenditure types, institutions and education level.

2.1 Data description

The statistics is a twofold annually record which shows the financing of and expenditures associated with education seen from the perspective of both finance sources and education institutions. The statistics contributed to the UOE data collection on formal education, which is made in collaboration with UNESCO, OECD, Eurostat and the national statistical agencies. The statistics are included in OECD's yearly publication *Education at a Glance*.

- **The financing part** illustrates from which sources educational institutions receives funding. The funding is distinguished between funding from the general government, (central and local government), private sources including private companies, non-profit organizations and households along with international sources.
- **The expenditures** are shown from the perspective of the education institutions and shows how the funding is used across the different expenditure types: compensation of personnel, other current expenditures, capital expenditures and research and development (R&D).

Both the finance and expenditure part is divided by education level.

2.2 Classification system

The [ISCED](#) classification is applied to obtain a consistent and international comparable statistic. To reflect the Danish educational system, primary and lower secondary (ISCED1 and ISCED2), are combined at the primary school level (grundskole).

The [COFOG](#) classification (Classification of the Functions of Government) is used to compile the statistics for general government by extraction on COFOG category 9 which concerns education. We use COFOG 91 for the primary school level, COFOG 92 for upper secondary education and COFOG 93 for tertiary education levels.

2.3 Sector coverage

The statistics cover education with in the general government (S.13), non-profit organizations serving households (NPIsH) (S.15), the household sector (S.14), the non-financial, financial corporations (S.11 and S.12) and rest of the world (S.2). The coverage of the household sector, the non-financial, financial corporations and rest of the world are under development. General government covers central and local governments along with social security funds.

2.4 Statistical concepts and definitions

UOE: UNESCO, OECD and Eurostat

Compensation of personnel: Covers educational institutions expenditures on salaries, retirement and other non-salary compensation for both teaching and non-teaching staff.

Other current expenditures: Expenditures on goods and services. that are consumed in relation to educational activities. This applies to maintenance of school buildings, rent and consumption of materials.

Capital expenditures: Expenditures on assets lasting longer than one year. Depreciation of capital assets is not included in the statistics as the capital outlays are recorded in the year in which they are made.

Research and Development (R&D): Expenditure on R&D is defined according to the OECD Frascati Manual. It includes all expenditures on research performed at universities and other institutions of tertiary education including teaching hospitals.

2.5 Statistical unit

The statistical units relevant for this statistics are all public and private educational institutions., that offers training courses with a duration of at least 6 months.

2.6 Statistical population

All educations with a duration longer than 6 months and Danish accreditation along with all units both public and private which have expenditures associated with education or contributes to the funding of education.

2.7 Reference area

Denmark and internationally mobile students in short exchange programs (of at least 3 months but less than a academic year) who remain enrolled in their home institution and earns credits for successful completion of the study abroad which is awarded by the home institution.

2.8 Time coverage

The statistics are compiled for year 2016 and onwards.

2.9 Base period

Not relevant for this statistic.

2.10 Unit of measure

DKK millions.

2.11 Reference period

The statistics follow the calendar year.

2.12 Frequency of dissemination

Annually

2.13 Legal acts and other agreements

§ 6 in Law on Statistics Denmark.

Statistics on expenditure on education and lifelong learning are regulated under [Regulation \(EU\) No 912/2013 of the European Parliament and of the Council](#).

2.14 Cost and burden

There is no reporting burden for this statistics as the information is obtained either within Statistics Denmark or by publicly available sources.

2.15 Comment

Additional information can be obtained by contacting Statistics Denmark. For more information see the [subject side](#)

3 Statistical processing

Data is collected annually from both internal and external sources. The internal sources consists of national accounts and data from other statistics from Statistics Denmark. The external sources consists of the Ministry of Educations portal of accounts from educational institutions, data for state education support (SU) from the Ministry of Education and Research along with data provided from annual reports from private educational institutions. Collected data is validated on a macro level by controls of time series and different reasonableness checks. Further, the quality is continuously controlled by Eurostat and OECD. The statistical data compilation consists of the classification in regards to the coding of national accounts along with distribution to educational levels based on number of pupils/students.

3.1 Source data

The statistics are compiled by a number of both internal and external sources.

Internal sources: - Data from Statistics Denmark's internal data base DIOR (Data base for integrated public accounts) which stores the accounts from the central and local governments. - Data from the statistics on [research and development](#) - Data from the statistics on [grants for educational purposes](#)

External sources: - Data from the Ministry of Education's [portal on accounts](#) for private educational institutions: primary schools and lower secondary schools. - Data from publicly available annual reports on private educational institutions providing tertiary education. - Data from the Ministry of Education and Research on state education support (SU).

We use a distribution key from aggregated micro data on pupils and students in order to divide the expenditures and funding into ISCED-levels. The aggregated microdata on pupils and students on different ISCED-levels are compiled from the Office Population and Education located at Statistics Denmark.

3.2 Frequency of data collection

Data is collected annually.

3.3 Data collection

For the public part of the statistics, data is collected from DIOR conditioned on COFOG category 09 which concerns education. By a thorough analysis of the accounts from the central and local governments there is developed a list which establishes the relevant accounts according to the UOE manual.

From StatBank Denmark data about the funding from private companies to educational purposes is obtained from the statistics on grants to educational purposes. Further, information about the funding of and expenditures on research and development is obtained from the statistics on research and development from StatBank Denmark.

Data concerning the State education support is gathered from the Ministry of Education and Research. The received data is divided into ISCED-levels.

For the private educational institutions accounts are downloaded from the Ministry of Education's portal on accounts. Information on private tertiary educational institutions are gathered from publicly available annual reports.

3.4 Data validation

A large part of the data compiled in the statistics is validated within public finances. The accounts are validated at a macro level by controls of time series and different reasonableness checks. As a part of the validation process of the public finances, COFOG is validated too. Further, data is validated by looking at the development across time along with a comparison in the development of expenditures and number of pupils.

The quality is continuously checked by Eurostat and OECD.

3.5 Data compilation

After the collection of data from different sources data is classified according to coding of national accounts. Data from the Integrated Database for Public Accounts (DIOR) is already in the format of the ESA2010 and COFOG-classification. ESA2010 distinguish between the following expenditures: compensation of employees, intermediate consumption and investments. COFOG classifies the governmental expenditures into functions here educational purposes. Based on the COFOG-classification, the expenditures can be allocated to education levels (primary, lower secondary, upper secondary and tertiary). The education levels are classified internationally by ISCED, The reclassification from COFOG to ISCED happens by the use of a distribution key based on the number of pupils/students.

The collected data from other sources are not obtained directly by the above classifications thus needs to. First data is aggregated for each source and than classified according to ESA2010. Lastly, the expenditures and funding are allocated to educational levels.

After end classification and coding, all data sources are integrated and aggregated across expenditure types, finance sources, educational levels and educational institutions. Consolidation is made to avoid double counting.

3.6 Adjustment

No corrections are made besides what have already been mentioned under data validation and data compilation.

4 Relevance

The statistics are relevant for a number of international organizations whom use the statistic as an input for the yearly publication on education, which compares the subject internationally. The public aspect of the statistic is fully covered by the national accounts while the private aspect is under development. The private aspect will for some elements be undervalued due to limited information.

4.1 User Needs

The purpose of the statistics is to contribute to an internationally comparable data base on resource consumption and the types of expenditure dedicated to education. The statistics are included in the OECD's annual publication [Education at a glance.](#) Currently, no specific national needs have been identified.

4.2 User Satisfaction

Data regarding user satisfaction is not gathered at the moment.

4.3 Data completeness rate

The statistic fulfills the demands in the regulation made by EU.

The purpose of the statistics is to cover all international, public and private financing sources and expenditures in relation to education in Danish educational institutions. The statistics are under development, which implies that especially the private and international financing sources are deficient. The public part of the statistics are fully covered by the national accounts.

Household expenditures to educational goods and services are not included in the statistics at the moment, but expected to be included in the future. This means that the total financing of education from households are undervalued. Further data from the private tertiary educational institutions is based on annual reports, which are gathered at different points in time during the calendar year why some data is missing. Thus both financing and expenditures to private tertiary education is undervalued.

5 Accuracy and reliability

Misclassification can arise as it can be difficult to assess whether certain parts are within the scope of the UOE-manual. This is especially a concern regarding research and development activities. In these cases, it will be an assessment of the specific account or the specific area whether this should be included with the best possible starting point in the UOE-manual.

Furthermore, at present it is not possible to identify the total funding for education from households as well as abroad, which is why these will be underestimated. In addition, the expenditures on private tertiary education underestimated as well.

5.1 Overall accuracy

The overall precision of this statistics is relatively high, as the majority of the statistics is based on reported accounts from the central and local governments along with not-profit institutions serving households. However, there might be an underestimation regarding the funding of education from households and the rest of the world. In addition, the low level of detail from the sources about private tertiary education yields in an underestimation of both expenditures and funding.

5.2 Sampling error

Not relevant for this statistic

5.3 Non-sampling error

Other sources of uncertainty in this statistics can be attributed to various 'measurement errors' e.g. incorrect entries in the general government accounts, error categorization within the ISCED classification, and incorrectly included or omitted accounting items cf. the UOE-manual. Incorrect postings on accounts would occur outside Statistics Denmark. A close cooperation between Statistics Denmark and those responsible for accounting within public administration and service, however, helps to ensure troubleshooting and continuous quality improvements of the public accounts. Miscategorization and incorrectly included or omitted records often depend on misinterpretations of the international classifications, as well as the risk of overlooking relevant expenditure items. We are working continuously on ensuring a high quality.

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 data base is considered to be of good quality as it consists of official accounts. Thus it needs to be noted that the data for private tertiary educational institutions are less detailed hence of less quality. The statistics are consistent and comparable throughout the entire period.

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 follow the national accounts audit policy, where recalculations of the two previous years are made at the same time as the calculation of the most recent year. The revisions are published at the same time as the publication of the most recent year's publication.

6 Timeliness and punctuality

The statistics are published 23 months after the end of the reference period. The statistics are published without delays in relation to planned release times.

6.1 Timeliness and time lag - final results

The statistics are published annually and follow the rhythm of data transmission to the international statistics of UNESCO, OECD and Eurostat. From the end of the reference period, it takes 23 months for the first release. From the end of the reference period, two years and eleven months pass until final publication.

6.2 Punctuality

The statistics are published without delay, with reference to the announced time of publication in the release calendar.

7 Comparability

The statistics are regulated by the EU and are published by Eurostat and the OECD. The statistics are therefore comparable internationally via reports to Eurostat and the OECD, which subsequently publish the figures with the other EU and OECD member countries. The statistics were first published under the auspices of Statistics Denmark in 2020 and data is traced back to 2016. Previously, the Danish Agency for IT and Learning has been responsible for these statistics. The redistribution of the statistics can imply inconsistencies between data in the time period before 2016 and after in the international data bases.

7.1 Comparability - geographical

The report follows Eurostat and the OECD's manual UOE data collection on formal education. These statistics are reported to Eurostat and are thus made available for comparison with similar statistics for the other EU countries. The statistics are compiled according to the UOE manual and ISCED-classification, which forms the basis for international comparability, and the statistics are thus internationally comparable.

7.2 Comparability over time

The statistics are compiled in the same way in the period 2016-2019 in Statbank. Data published before calendar year 2020 is compiled by the ministry of Education and can be found in the international data bases. However, one need to be careful when comparing data before 2016 with data after 2016.

7.3 Coherence - cross domain

A large amount of data for the statistics regarding expenditure on education originates from the public accounts, which are included in national accounts, and there is thus a connection to the national accounts. Differences can be explained by differences between UOE classifications and the concepts of the national accounts. Further the statistics are enriched with data from e.g. private educational institutions, among others.

7.4 Coherence - internal

The statistics are internal consistent. This is ensured using the national accounts as a framework and source basis.

8 Accessibility and clarity

The statistics are published in NYT from Statistics Denmark as well as published in StatBank Denmark. In addition, internationally comparable figures for education expenditure are available from Eurostat and the OECD.

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

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

These statistics are published in a Danish press release.

8.5 Publications

The statistics are published in the OECD's *Education at a Glance*.

8.6 On-line database

The statistics are published in StatBank Denmark under Expenditure on education in the following tables: - [UOE1](#): Expenditure on education by level of education, type of expenditure and ownership. - [UOE2](#): Expenditure on education by level of education, source of funding and counterpart sector.

8.7 Micro-data access

The microdata of the statistics is not accessible.

8.8 Other

Data is forwarded to Eurostat, which forwards data to the OECD and UNESCO.

8.9 Confidentiality - policy

[Data Confidentiality Policy](#) for Statistics Denmark is applied.

8.10 Confidentiality - data treatment

The statistics are published at a level of detail that does not require further discretion

8.11 Documentation on methodology

The statistics are produced according to the guidelines of the UOE data collection of formal education.

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 this statistics is in the division of Governmental Finances. The person responsible is: - Louise Mathilde Justesen, tel: + 45 39 17 33 57, e-mail: lom@dst.dk

9.1 Contact organisation

Statistics Denmark

9.2 Contact organisation unit

Government Finances, Economic Statistics.

9.3 Contact name

Louise Mathilde Justesen

9.4 Contact person function

Responsible for the statistics

9.5 Contact mail address

Sejrøgade 11, 2100 Copenhagen

9.6 Contact email address

lom@dst.dk

9.7 Contact phone number

Tlf: +45 39 17 33 57 Phone: +45 40 26 47 43

9.8 Contact fax number

+45 39 17 39 99

