

**Documentation of statistics for  
Educational expenditure (UOE Finance) 2022**

## 1 Introduction

The purpose of the statistics is to show how education expenditures are distributed across source of funding, expenditure type, type of institution along with the level of education. The statistic is based on international standards for education expenditures by the manual UOE data collection on formal education (UOE2020), which is developed by UNESCO, OECD and Eurostat. The statistic is used as an input to OECD's publication Education at a Glance, which compares educational systems across countries. The statistics are developed from finance year 2016 and onwards. Data is consistent and comparable throughout the entire period.

## 2 Statistical presentation

The statistic is an annually two-dimensional publication of education expenditures, which shows the consumption of education seen from the perspective of both sources of funding and educational institutions. The statistic is calculated in DKK millions and divided across financing sources, expenditure type, type of institutions and education level.

### 2.1 Data description

The statistic is an annual two-dimensional publication, which shows expenditures distributed across sources of funding, expenditure type, type of institution and level of education. The statistic is compiled according to international standards for expenditures on education in the form of the manual [UOE data collection on formal education \(UOE2020\)](#) and is used as an input to OECD's annual publication [Education at a Glance](#), which compares educational systems across countries.

The statistic looks at education from two perspectives: 1. **Funding of education:** shows from which sources educational institutions and households receive funding. Sources of funding are distinguished between public (central and local), private including households and international sources. 1. **Expenditures of education:** shows how the financing of education is used across the following expenditure types: compensation of employees, other current expenditures, capital expenditure, expenditures for research and development (R&D) and transfers of educational support (SU) and other grants to households.

Both funding and expenditures are divided by level of education.

### 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-klassifikationen](#) (Classification of the Functions of Government) is used to compile the statistics on 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.

Other than that all groupings and classifications for education expenditures determined by the international manual for education (UOE2020).

### **2.3 Sector coverage**

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

All public as well as private educational institutions.

### **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**

Expenditures are shown in DKK millions and current prices.

### **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 publicly available sources.

### **2.15 Comment**

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

## **3 Statistical processing**

Data for this statistics is collected annually from a number of both internal and external sources using data extracts and data deliveries. The collected data is validated on a macro level by controls of time series and different reasonableness checks. When data have been validated, the classification according to UOE2020 begins following by imposed distributions based on student data gather internally from Statistics Denmark. Lastly, data is integrated and compiled into the final result.

### 3.1 Source data

The statistic is compiled using a number of internal and external sources.

#### Internal sources

- Data extracts from Statistics Denmark's internal database DIOR (database for integrated public accounts), which stores the accounting information from the central and local governments. This forms the primary data base.
- Data from table [RDCE01](#) and [RDCE03](#) on expenditures and funding of research and development (R&D). Table [FOND03](#) and [FOND15](#) on funding of education from private funds.
- Data deliveries from the office of Population and Education in Statistics Denmark on the number of students at different levels of education. Data from here are used to as distribution keys.
- Data deliveries from the office of Science, Technology and Culture on the distribution of expenditures on research and development between short and long tertiary educations.

#### External sources

- Data deliveries from Danish Agency for Higher Education and Science about the state's education support (SU) and adult education support (SVU).
- Accounts from The National Agency for Education and Quality's [accounting portal](#) for the independent primary schools, post-secondary schools, private secondary schools and combination schools.
- Data from publicly available annual reports from the private tertiary educational institutions.

### 3.2 Frequency of data collection

Data is collected annually.

### 3.3 Data collection

The majority of data is collected by data extractions from Statistics Denmark's internal database DIOR (database for integrated public accounts) and acquisition of data from Statbank. Data extractions from DIOR are conditioned on the UOE2020 definition of education expenditures. By an in depth examination of the central government accounts §19 Ministry of Higher Education and Science and §20 Ministry of Children and Education along with the local government accounts a code list have been prepared which determines all relevant expenditures from the public accounts within the scope of UOE2020. Furthermore, a part of data is collected from supplementary sources like annual accounts from the National Agency for Education and Quality and annual reports for private tertiary educational institutions.

### 3.4 Data validation

The public part of the statistic, which is gather form DIOR data is validated within the scope of the statistics [General Government Finances](#). In addition data from external sources is validated on a macro level by controls of time series and different reasonableness checks.

### **3.5 Data compilation**

When the collection of data is complete, data is classified according to the UOE2020 manual.

The classification of primary data is made through a number of processes: 1) data from general government finances are compared with previous years and all previous classifications are transferred to recent year. 2) New accounts are classified according to the UOE2020 manually. 3) Student distributions are the applied, which gives information about the distribution of students on ISCED-level. The reclassification will lead to changes for levels of education.

When the classification is finalized data is integrated, validated and transmitted.

### **3.6 Adjustment**

No corrections are made to data beyond what has already been described under Data Validation and Data Compilation.

## **4 Relevance**

The statistic is relevant for professionals and analysts. The statistic is included in the annual publication by OECD Education at a Glance and will be launch in OECD's database OECD.Stat along with Eurostat. Professionals and analysts use the statistics to get a detailed overview of the expenditure to education across education levels and the funding of those in Denmark.

### **4.1 User Needs**

The purpose of the statistic is to contribute to an international comparable database concerning the education expenditures and funding of education. OECD uses the statistic as an input to the annual publication [Education at a Glance](#) and publish the data on their own database [OECD.stat](#) and [Eurostat](#). Nationally, the statistic is used by professionals and analysts to get an overview of how education is financed along with which education levels demands most resources.

### **4.2 User Satisfaction**

The statistics are carried out because of international needs and regulations. At present, no specific national needs have been identified.

### **4.3 Data completeness rate**

The statistic fulfill the demands in the regulation made by EU. The publication of data in StatBank table UOE1 and UOE2 is identical to the detail level transmitted to Eurostat.

At the moment the funding from households and international sources are not fully covered in the statistic, but is expected to be implemented in the future. This implies, that the total funding form households and international sources will be underestimated.

## **5 Accuracy and reliability**

The overall accuracy of the statistics is considered to be high, as the primary data sources are contributed by the general government finances. However, there is uncertainty associated with the funding of households and international sources to education. Moreover, misclassifications can occur as it can be difficult to determine whether some areas are within the scope of UOE2020. The detail level from annual reports used for private tertiary education is fraught with uncertainty because of the overall coding.

### **5.1 Overall accuracy**

The overall accuracy of the statistic is high, as the primary data sources are constituted by the general government finances. Distribution keys are based on student data to divide expenditures across education levels. The level of detail from annual reports for the private tertiary educational institutions is concerned with a degree of uncertainty due to the overall coding. Further, the funding from households and international sources is not fully covered.

### **5.2 Sampling error**

Not relevant for this statistic

### **5.3 Non-sampling error**

Misclassification within the UOE2020 framework can lead to systematic uncertainty. The misclassification is attempted to be reduced by a detailed review of each account and after thorough research included or excluded. Furthermore, changes can occur in the lineup of annual reports, which can lead to over or underestimation of education expenditures.

### **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 statistic reflects expenditures to education and the funding of education in Denmark and is published annually 11 months after the end of the reference period. Data is revised back to year t-3. However, extraordinary revisions may occur for the entire time series, as the statistic is relatively new. The statistic is in accordance with UOE2020 definitions and classifications and is presented with Danish education terminology, which should result in a easier interpretation. The statistic is consistent and international comparable with countries within the OECD and Eurostat in the entire time 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 statistic follows the revision policy of national accounts, where year t-3 and t-2 are recalculated simultaneously with the calculation of year t-1. The revision of t-3 and t-2 are published at the same data as t-1.

## 6 Timeliness and punctuality

The statistics are published 11 months after the end of the reference period and 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 11 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 statistic is published without any delays in relation to the pre-announced time of publication in the release calendar.

## 7 Comparability

The statistic follow common European guidelines in the manual UOE data collection on formal education (UOE2020). The statistic is fully comparable across time and countries for the entire published time period. Previously the reporting burden to UNESCO, OECD and Eurostat was acquired from the National Agency of IT and Learning under the Ministry of Children and Education.



### **7.1 Comparability - geographical**

The statistic is made in accordance with the guidelines in the manual [UOE data collection on formal education \(UOE2020\)](#), which is made in collaboration with UNESCO, OECD and Eurostat. Data is published by both OECD and Eurostat. The statistic is fully international comparable with the other reporting countries.

### **7.2 Comparability over time**

The statistic is compiled following the same method in the entire time period from 2016 onwards in the StatBank. Data prior to 2016 can be found in the international databases and were transmitted by the National Agency of It and Learning. Thus, comparisons with data prior to 2016 needs to be interpreted with caution, as the method for the published data by Statistics Denmark for 2016 and onward can differ from the method applied for earlier transmitted years.

### **7.3 Coherence - cross domain**

The majority of data originates from the general government finances, which are included in the National Accounts, why there is a link to this. The difference between the inventories is caused by differences in the UOE classification and the concepts of National Accounts.

### **7.4 Coherence - internal**

The statistic is internally consistent, which is ensured by consolidations of transactions and application of the concepts of national accounts.

## **8 Accessibility and clarity**

The statistic is published in New from Statistics Denmark and in the StatBank under Education expenditures. For more information see the subject page. In addition, the figures are included in OECD's annual publication Education at a Glance. Moreover, data is published by OECD and Eurostat.

### **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**

The statistic is published in New from Statistics Denmark: [Education expenditures](#).

#### **8.5 Publications**

The statistic is published in OECD's Education at a Glance, which uses the statistic as an input to calculate a number of different education indicators. These indicators will be described in Education at a Glance and forms the foundation for comparisons across countries.

#### **8.6 On-line database**

The statistics are published in StatBank Denmark under **Education expenditures** 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

The tables have in 2023 been updated such that the level of expenditure equals the level of funding of education. This is done by adding the expenditure types *Scholarships and other grants* and *Unknown*. The latter is a balancing item. This item gives an indication of whether there is an over/underfunding of education.

#### **8.7 Micro-data access**

Micro-data is not available.

#### **8.8 Other**

Data is transmitted to Eurostat, who forwards data to OECD and UNESCO. Transmitted data can be found in the international databases at OECD and Eurostat.

#### **8.9 Confidentiality - policy**

The statistic follows Statistics Denmark's data confidentiality policy.

#### **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 the statistic 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.

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N/A