

**Documentation of statistics for  
Government budget allocations for research and development  
2020**

## 1 Introduction

The statistics give information on the general government budget for research and development from 2001 onwards. The Ministry of Finance is in charge of the bigger part of the data collection.

## 2 Statistical presentation

The purpose of the GBARD-statistics is to inform on the public funds available for research and development. The information includes information on the amounts available from the different parts of General Government.

### 2.1 Data description

The GBARD-statistics comprise expected costs to research and development on the budget of General Government and international organisations (the EU and the Nordic Council of Ministers) financing of research and development in Denmark. In Statbank you can find tables on financing through the State Budget on socioeconomic purposes, sectors and type of appropriation. About 80 percent of all public financing of research and development is on the State Budget.

The socioeconomic categories is the NordForsk 16-classification. The Sectors are Universities, Research Councils, International Activities, Other Grants, Research Institutes and Other. Before 2007 the Sectors were different. From the State Budget it is possible to get information on which Ministries allocates funds for research and development and more details on the appropriations.

### 2.2 Classification system

Socioeconomic category: the appropriations are categorized according to the NordForsk classification with 16 categories.

Sectors:

- Universities et al.: Universities belonging under the Order on Universities, and other higher education institutions, doctoral students and research institutes formerly belonging to the universities.
- Research Councils: the Strategic Research Council and an other Research Council (now also Innovation Denmark)
- International Activities: appropriations with some kind of international relation - included is institutions as well as grants
- Other Grants: Funding activities of a total of more than mill DKK 25
- Research Institutions: Research institutions not belonging under the Order on Universities and without educational obligations.
- Other: other appropriations for research and development

### 2.3 Sector coverage

All sectors.

## **2.4 Statistical concepts and definitions**

**Applied research:** Applied research is the original investigation undertaken in order to acquire new knowledge. It is, however, directed primarily towards a specific practical aim or objective.

**Budget:** A budget is an estimate for the expenses within a specified area and a specified period.

**Experimental research:** Experimental development is systematic work, drawing on existing knowledge gained from research and/or practical experience, which is directed to producing new materials, products or devices, to installing new processes, systems and services, or to improving substantially those already produced or installed.

**Research and development:** Research and development is a concept defined in the Frascati manual when used in official statistics. Research and development consists of basic research, applied research and experimental research.

**Basic research:** Basic research is experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundation of phenomena and observable facts, without any particular application or use in view. Experimental development is systematic work, drawing on existing knowledge gained from research and/or practical experience, which is directed to producing new materials, products or devices, to installing new processes, systems and services, or to improving substantially those already produced or installed. R&D covers both formal R&D in R&D units and informal or occasional R&D in other units.

## **2.5 Statistical unit**

The statistic is published for each funding part.

## **2.6 Statistical population**

All public expenditures to research and development on the budget.

## **2.7 Reference area**

Denmark.

## **2.8 Time coverage**

2001 - 2023

## **2.9 Base period**

Current year.

## **2.10 Unit of measure**

Mill. DKK.

### **2.11 Reference period**

Current year.

### **2.12 Frequency of dissemination**

Yearly.

### **2.13 Legal acts and other agreements**

Act on Statistics Denmark § 6 (jf. lovbekendtgørelse nr. 15 af 12. January 1972 with the amendments that follows order no 386 of 13. June 1990, no 1025 of 19. December 1992 and no 295 of 2. May 2000).

### **2.14 Cost and burden**

The Ministry of Finance collects most of the data. Time consumption is not known. The burden on other respondents is minimal.

### **2.15 Comment**

For further information please contact Statistics Denmark.

## **3 Statistical processing**

Data are received and published once a year. The primary data source is the State Budget for Research and Development. Statistics Denmark receives data in excel sheets but data are collected using questionnaires. The Ministry of Finance ensures quality control of reported data. In a few cases Statistics Denmark examines further the relevance of reported data.

### **3.1 Source data**

The data, for the the government budget allocations (GBARD), is collected from from the Ministry of Finance, Nordic Council of Ministers, the budget for the EU, Danmarks Grundforskningsfond and the statistics on Research and Development in the Public Sector and in the Business Sector.

The total government expenditures with and without international funds as a percentage of the GDP in 2019 is computed with the use of a GDP estimate from Økonomisk Redegørelse

### **3.2 Frequency of data collection**

Data are received and published once a year.

### **3.3 Data collection**

Statistics Denmark receives from the Ministry of Finance the State Budget for Research and Development in an excel-sheet. The Ministry of Finance collects the data from the ministries in questionnaires.

### **3.4 Data validation**

Data from the State Budget are validated by the Ministry of Finance and only in case of obvious mistakes, misunderstandings or errors will Statistics Denmark investigate these data further.

### **3.5 Data compilation**

The current year's budget for research and development from local and regional authorities is estimated by using historic expenditures on R&D in percentage of the total expenditures and using this percentage on the current year's total budget.

Funds from the EU are calculated in the same way - the percentage is computed as the share of the former EU budget program paid to Danish researchers.

### **3.6 Adjustment**

Fixed prices are calculated using the same wage price index as the Ministry of Finance.

## **4 Relevance**

Reporting of the data to the EU is regulated by order.

### **4.1 User Needs**

Primary users are the EU, Ministries, organizations, the press, politicians and other persons with a need for information on public financing of research and development.

### **4.2 User Satisfaction**

No surveys on user satisfaction is carried out.

### **4.3 Data completeness rate**

Not relevant for this statistic.

## **5 Accuracy and reliability**

Quality is expected to be good as data is reported directly from the ministries responsible for the accounts with research and development and as the Ministry of Finance validates the data.

### **5.1 Overall accuracy**

The GBARD statistics gives good information on Danish total public funds available for research and development. The purpose of budgets is to estimate expenditures in a given future, or not yet finished, period of time. For this budget no financial report is made and the total precision is unknown. The final budgets are, however, expected to be close to the accounts.

### **5.2 Sampling error**

It is not a sample.

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

Uncertainty is primarily related to the correct delimitation of the concept of research and development.

The budget for local and regional authorities is based on a calculation involving a two-year old percentage used on their current budget.

The funds from the Nordic Council of Ministers is an estimate since most funds are allocated in projects and programs involving multiple nordic countries.

### **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

Quality is expected to be good as data is reported directly from the ministries in charge of the relevant accounts and data is validated by the Ministry of Finance. Quality might be improved by a thorough reading of the text in the state budget. Instead efforts have been to improve the guidelines on how to report to this statistic.

A part of the budget under 'General advancement of knowledge' is categorized as the socio-economic objective 14.7: R&D not categorized according to purpose. This is due to research foundations that focus on a broad range of objectives and thus aren't able to know in advance which objectives the budget will be spent on.

The budgets from local and regional authorities depict the development in the reported costs to research and development during previous years including the errors that might be in these statistics.

## 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

Appropriations on the state budget come in a preliminary form from the budget as agreed upon by the politicians and in a final form from the budget with the amendments to the budget decided upon through the year.

Data will be revised in case of the availability of higher quality data.

## 6 Timeliness and punctuality

The statistic comprises data on the state budget which are published in the beginning of the reference year, and data on other parts of the GBARD-statistic which are published half a year later.

The statistic is usually published without delays.

### 6.1 Timeliness and time lag - final results

Preliminary budget figures are published in the middle of the reference year. Final data are published the following year.

The statistic is usually published without delays.

### 6.2 Punctuality

100 percent.

## **7 Comparability**

The statistic is comparable with GBARD-statistics for other countries.

### **7.1 Comparability - geographical**

The statistic is collected in accordance with the international guidelines for statistics on research and development and is internationally comparable to similar statistics from other countries.

### **7.2 Comparability over time**

The statistic is published in fixed prices as well as in current prices in order to improve the comparability over time. Methodological changes have been made but is without consequence for the overall development.

The sectors of the state budget were changed in 2007 and is not comparable with data on sectors before 2007.

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

There is no other statistic on this subject.

### **7.4 Coherence - internal**

Not relevant for this statistic.

## **8 Accessibility and clarity**

The statistic is published in News from Statistics Denmark and is part of the yearly publication Innovation og forskning. Data are available in Statbank in the tables: FOUBUD, FOUBUD1, FOUBUD4, FOUBUD5.

Choose Education and knowledge and then Research, development and innovation.

### **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**

Publications with data on research and development and innovation can be found on Statistics Denmark's website for higher education and science: [Forskning og udvikling](#).

#### **8.5 Publications**

The yearly publication Innovation and Research includes a chapter on the GBAORD-statistic. You can download the publication here: [Innovation og forskning 2017](#).

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

The statistics are published in the StatBank under the subjects in the following tables:

- [FOUBUD](#): Government Budget for Appropriations or Outlays for R&D by grant-awarding organizations, price unit and time
- [FOUBUD1](#): Central Government appropriations for R&D by socio-economic objectives, sector, type of appropriation and time
- [FOUBUD4](#): Central Government appropriations for R&D by sector, type of appropriation and time
- [FOUBUD5](#): Central Government appropriations for R&D by socio-economic objectives, type of appropriation and time

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

All data are published.

#### **8.8 Other**

There are no restrictions on the data which are published with the highest level of details.

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

All data are published.

#### **8.10 Confidentiality - data treatment**

Not relevant for this statistic.

#### **8.11 Documentation on methodology**

Frascati Manual 2015

#### **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 Government Finance. The person responsible is Helene Gjermansen, tel. +45 39 17 34 65, e-mail: hgj@dst.dk

### **9.1 Contact organisation**

Statistics Denmark

### **9.2 Contact organisation unit**

Government Finance, Economic Statistics

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