

GOVERNMENT BUDGET APPROPRIATIONS OR OUTLAYS FOR R&D BY SOCIO-ECONOMIC OBJECTIVES (GBAORD) – METHODOLOGICAL INTRODUCTION

A. METHODOLOGY

Among main duties of the government in the science and technology area, respective in research and development area, belongs also the role of policy maker, who establishes the strategy of the research and development policy in medium-term period. In the Czech Republic, the national research and development policy is declared in the document “*National research and development policy of the Czech republic*”¹. For the R&D policy is responsible the R&D Council together with the Ministry of Education. It is important to know information (data) about the level of investment into the R&D and human resources. The data provider of this information is just the Czech Statistical Office.

For the support of decision-making, which fields of R&D need to strengthen funding in forthcoming years, was launched the GBAORD project within the EU member states several decades ago. The aim of GBAORD (Government Budget Appropriations or Outlays for R&D by Socio-economic Objectives) is providing data about the government support of R&D funding from public budgets broken down by socio-economic objectives.

Legislative background:

Within the European Community, the GBAORD project is organized on obligatory base under **Commission regulation (EC) No 753/2004** of 22 April 2004 implementing Decision No 1608/2003/EC of the European Parliament and of the Council as regards statistics on science and technology. The collecting of GBAORD data is obligatory for the Czech republic.

Methodological sources:

Methodological information about the GBAORD project can be found in the international manual “*Proposed standard practice for survey on research and experimental development*” famous like “**Frascati manual**” (revised version 2002), which has arisen as a result of initiatives by the OECD. GBAORD data are broken down by socio-economic objectives on the basis of **NABS: Nomenclature for the analysis and comparison of scientific programmes and budgets** (rev. 1993, Eurostat 1994 and rev. 2007, Eurostat 2007).

Conception of GBAORD:

Unlike other statistical surveys carried out in the field of research and development, GBAORD data are based on the analysis and identification of all appropriations spent on research and development (R&D) from public budgets. These government R&D appropriations are broken down by socio-economic objectives. This means that the approach is based on the funder of research and development activities unlike performance-based approach, which is using for example in the R&D survey (VTR5-01).

GBAORD covers all appropriations or outlays allocated to R&D in public budgets to support research and development, including all contributions to international R&D programmes or institutions abroad. Data are based on final budget appropriations (figures as voted by parliament for the coming year – provisional data) and actual outlays (money paid out during the year – final data). Public budgets cover the central government budget and provincial budgets. The central government is always included and provincial government is included when its contribution is significant. Local government funds are excluded.

GBAORD includes both current costs and capital expenditure.

GBAORD also covers general university funds (Chapter 10: General research financed from Ministry of Education), which has been defined using narrow definition in line with the Frascati manual as a sum of money devoted to universities from the Ministry of Education in support their overall research activities.²

Codes of socio-economic objectives are distributed according to the purpose or general content of the R&D programme or project.

Transmitting of GBAORD data:

GBAORD data are transmitted to Eurostat (on obligatory base) and OECD (on voluntary base of membership) twice a year like: 1) provisional data and 2) final data. On the above mentioned legal act, GBAORD data are submitted to Eurostat like provisional (government R&D appropriations in the provisional

¹ The latest version of the document „National Research and Development Policy of the Czech Republic for 2004-2008“ can be available on the following website: <http://www.vyzkum.cz/FrontClanek.aspx?idsekce=5580>.

² In the case of the Czech republic, the general university funds are not defined. For this reason, chapter 10 covers in line with the guideline of the Frascati manual money devoted to universities from the Ministry of Education in support their overall research activities. Chapter 10 has taken name “general university research”, which is using in accordance with the statistical survey VTR5-01.

budget – as approved by the Parliament at the beginning of the budget year) within 6 months of the end of the calendar year and final data (government R&D appropriations in the final budget) within 12 months of the end of the calendar year.

The Chapters (main socio-economic objectives) of the 1993 version of the NABS are entitled:

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| 1. Exploration and exploitation of the Earth | – contains 8 SEO (NABS 2-level) |
| 2. Infrastructure and general planning of land-use | – contains 8 SEO (NABS 2-level) |
| 3. Control and care of the environment | – contains 11 SEO (NABS 2-level) |
| 4. Protection and improvement of human health | – contains 10 SEO (NABS 2-level) |
| 5. Production, distribution and rational utilization of energy | – contains 8 SEO (NABS 2-level) |
| 6. Agricultural production and technology | – contains 8 SEO (NABS 2-level) |
| 7. Industrial production and technology | – contains 14 SEO (NABS 2-level) |
| 8. Social structures and relationships | – contains 9 SEO (NABS 2-level) |
| 9. Exploration and exploitation of space | – contains 6 SEO (NABS 2-level) |
| 10. Research financed from General University Funds | – contains 10 SEO (NABS 2-level) |
| 11. Non-oriented research | – contains 10 SEO (NABS 2-level) |
| 12. Other civil research | – contains no SEO (NABS 2-level) |
| 13. Defence | – contains no SEO (NABS 2-level) |

B. GBAORD IN THE CZECH REPUBLIC

In the Czech republic, the GBAORD project is realized in close cooperation with R&D Council and the Ministry of Education, Youth and Sports through the Information system of research and development and its relational databases. The concept of the GBAORD project takes into account existing principal legal rules and documents on research and development in the Czech republic as stated in the Legislative Act No. 130/2002 Coll. on the Support of Research and development from Public Funds and on the Amendment to Some Related Acts (especially the Government Regulation No. 267/2002 on the Information System of Research and Development)³. The R&D Information System is an information system of the public administration for a collection, processing, publication and utilization of information about the research and development, which has been supported by public budgets. The R&D Information System administrator is the Research and Development Council; the R&D Information System operator is the Government Office of the Czech Republic. For needs of the GBAORD project are used the CEP database (Central register of R&D projects) and the CEZ database (Central register of research intentions). Supplementary data are obtained from the department of budget preparing at the R&D Council. CEP and CEZ databases do not include all government appropriations on R&D, that is why detailed information about contributions to international R&D programmes or institutions abroad and the specific university research must be obtained in cooperation with the Ministry of Education. Data on Chapter 10 (general university research by fields of science) are taken directly from universities. Information about returnable loans is taken directly from government departments, which are funding through their budgets R&D activities.

The processing of the GBAORD project and distribution of codes of socio-economic objectives (SEO) by NABS carry out employees of the Czech Statistical Office. In line with methodological guidelines, the non-R&D appropriations must be excluded from GBAORD. In this case it regards returnable loans (only projects realized before validation Act no. 130/2002 Coll.) and certain administrative costs. Adjusted data are classified by NABS at 3-digit level of socio-economic objectives. Multi-annual projects are processed by database software and new entered projects by the manual procedure according to a specific classification key based on the structure of the CEP and CEZ database.

Since 2006 the system of sophisticated control tools have been introduced to improve further the quality of data. Concerning GBAORD data 2006, the complex quality report has been set up within the grant project Transition Facility 2004, which was granted by Eurostat. The quality report will be submitted to Eurostat every 2 years based on new legal act for quality report in R&D statistics.

Since 2006 also new formulas for better estimation of preliminary data were created as well. The methodology of estimations will be improved further. Eurostat for GBAORD data publishes estimations for t+1, t+2.

Starting from 2007 the revised (more simple) classification NABS 2007 has been used for GBAORD data. Data for the Czech Republic will be published according old (detailed) NABS 1993 and also new NABS 2007.

³ For more information about the Information System of R&D see following website: <http://www.vyzkum.cz/>.