

METHODOLOGY OF THE STATISTICAL SURVEY ON RESEARCH AND DEVELOPMENT ACTIVITY (R&D)

1. Purpose, nature and use

The purpose of the statistical survey on research and development (R&D) is to provide internationally comparable information about the characterization of resources (expenditure and personnel) on research and development in Bulgaria.

The methodology of the survey is harmonized with the requirements of normative documents of the European Union (EU) in this statistical area:

- Decision No 1608/2003/EC of the European Parliament and of the Council of 22 July 2003 concerning the production and development of Community statistics on science and technology;
- Commission Implementing Regulation (EU) No 995/2012 of 26 October 2012 laying down detailed rules for the implementation of Decision No 1608/2003/EC of the European Parliament and of the Council concerning the production and development of Community statistics on science and technology.

2. Coverage and sources of information

The statistical survey on R&D is annual exhaustive survey and covers all enterprises and organizations performing R&D as a primary or secondary activity.

Units of observation are scientific institutions and organizations, the Bulgarian Academy of Sciences, Agricultural Academy, higher education institutes, university hospitals, enterprises and other organizations, which irrespective of their main activity perform R&D as well - i.e. if at least one person of the personnel is engaged in R&D during the year.

3. Definitions of indicators

The definitions of R&D indicators are fully compliant with definitions recommended in the methodological manual 'Frascati' (Proposed standard practice for surveys on research and experimental development - Frascati Manual, OECD, 2002), adopted by Eurostat for statistical surveys on R&D.

Research and development activity comprises any creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society and the use of this stock of knowledge to devise new applications. R&D activity covers basic research, applied research and experimental development.

The indicator 'R&D expenditure' is defined as all expenditures for R&D performed within a statistical unit, whatever the source of funds.

Total intramural R&D expenditure (GERD) comprises current costs and capital expenditure on R&D.

Current costs are composed of labour costs, expenditure on materials, external services and other current costs (excluding depreciation), supporting R&D activity.

Capital expenditure on R&D activity is composed of expenditure on purchase of land, construction and purchase of buildings, major repair and acquisition of instruments and equipment.

The indicator 'R&D personnel' measures the human resources going directly into R&D activity, responsible for creation, application and dissemination of new knowledge. R&D personnel include all persons employed directly in R&D, as well as those providing direct support on R&D (R&D managers, administrators and clerical staff). R&D personnel comprise two categories – researchers and other R&D personnel. The personnel can be measured both in headcount and in full-time equivalent. Personnel in full-time equivalent (FTE) are calculated on the basis of working time spent on R&D activity during the reference year. For example, if an university teacher spends 30% of his annual working time on R&D, and the rest of the time to teaching, the equivalent of his employment with R&D should be considered as only 0,3 FTE.

Researchers are professionals, directly engaged in performing R&D activity, i.e. working on conception and creation of new knowledge, products, processes, methods and systems and in the management of the projects concerned. Into this category also fall postgraduate students at the PhD level as preparation of the dissertation work corresponds to the R&D definition.

Other R&D personnel include technicians and other supporting staff. Technicians comprise persons having required technical knowledge and experience in one or more fields of science, working under the supervision of researchers. Other supporting staff includes skilled and unskilled craftsmen and specialists participating in R&D projects. Does not include persons indirectly related to R&D as guards, porters, workers in canteens, accountants and other.

R&D expenditure and R&D personnel are distributed in four institutional sectors:

- Business enterprise sector - includes all firms, organizations and institutions whose primary activity is production of market goods and services (other than those included in Higher education sector);
- Government sector - comprises general administrations of central or state government which furnish, but do not sell common services to satisfy the individual and collective needs of society and which are predominantly budgetary financed (other than those included in Higher education sector);
- Higher education sector includes all universities, colleges, other institutions of post-secondary education, research and development sectors to higher education institutions and university hospitals;
- Private non-profit sector - includes foundations, associations, etc. providing non-market services.

4. Classifications and nomenclatures used

- National classification of economic activities (NACE.BG-2003)
- Classification of economic activities (NACE.BG-2008)
- Field of science and technology (FOS) classification
- Classification of territorial units for statistics (NUTS) in Bulgaria
- International standard classification of education - revision 1997 (ISCED-97)

5. Release policy and dissemination format

The deadline for dissemination of the statistical information is specified in the Calendar presenting the results of the statistical surveys carried out by the NSI. Data are published twice a year: preliminary data (limited number of variables) - 10 months after the end of the reference period and final data (all variables from the List of the standard statistical indicators) - 15 months after the end of the reference period.

Results of the statistical survey on R&D are published on the NSI website – www.nsi.bg and in the following publications:

- Publication 'Statistical Yearbook of the Republic of Bulgaria'
- Publication 'Statistical Reference Book of the Republic of Bulgaria'
- Brochure 'Bulgaria'

Data extend to ministries, research organizations and other national users as well as Eurostat and other international organizations.