



RESEARCH AND DEVELOPMENT ACTIVITY IN 2014 (PRELIMINARY DATA)

In 2014, the total amount of **expenditure on research and development activity (R&D)** was 656.1 million BGN which was 25.8% more than the previous year.

R&D intensity (R&D expenditure as % of GDP) also increased in comparison with the previous year - from 0.64% in 2013 to 0.78% in 2014. Bulgarian national goal, related to the realization of Europe 2020 strategy, is to reach the 1.5% R&D intensity in 2020.

1. R&D expenditure

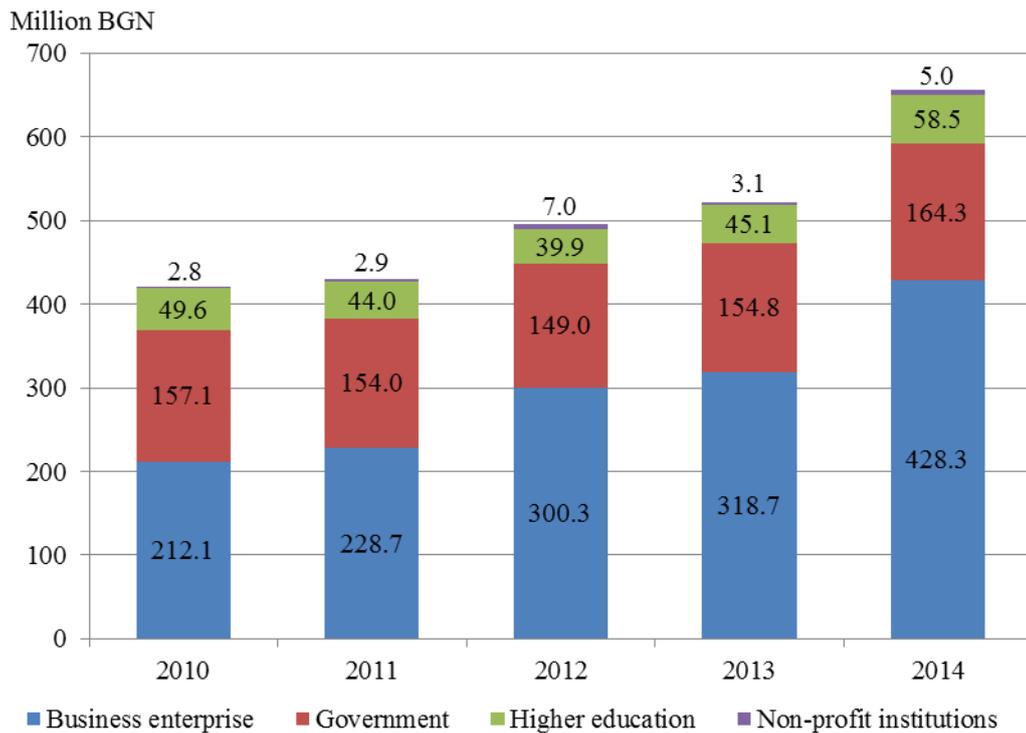
	2010	2011	2012	2013	2014
R&D expenditure in Bulgaria - million BGN	421.6	429.6	496.2	521.7	656.1
R&D expenditure as % of GDP	0.57	0.54	0.61	0.64	0.78

Almost all of the growth of the total R&D expenditure in 2014 compared to the previous year was due to the business enterprise sector where expenditure on R&D increased by 109.6 million BGN or 34.4%.

The business enterprise sector was the largest of the four institutional sectors of R&D performance, accounting for 65.3% of total R&D expenditure. It was followed by the government sector, higher education sector and private non-profit sector with share of 25.0%, 8.9% and 0.8% respectively (Figure 1).



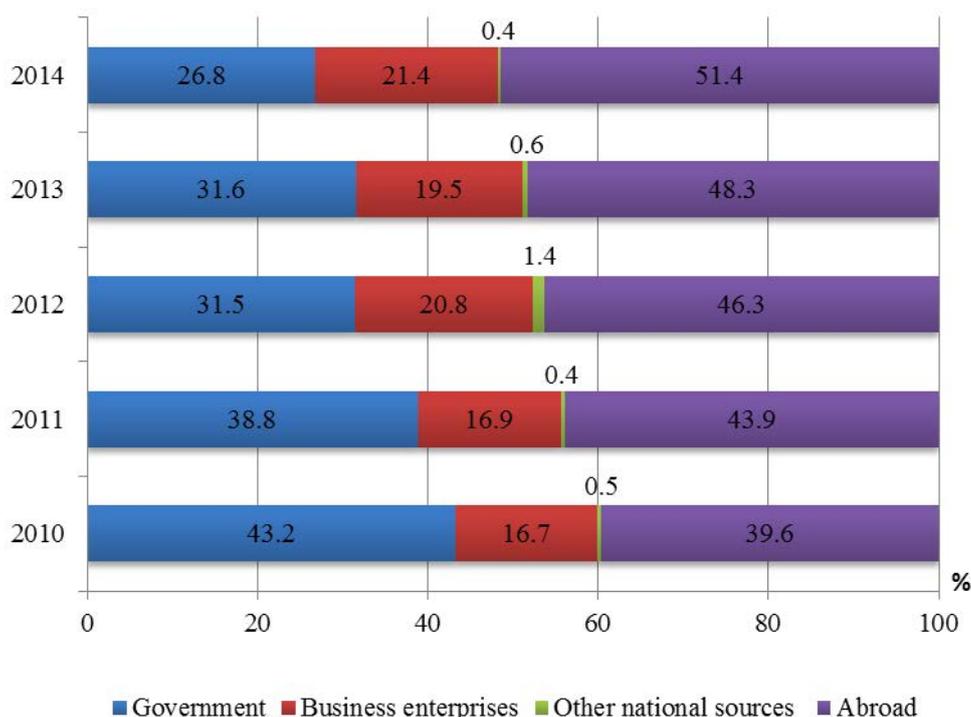
Figure 1. R&D expenditure by institutional sectors



The share of foreign sources of R&D funding in Bulgaria continued to increase - in 2014 it amounted to 51.4% of total R&D expenditure, compared to 48.3% in 2013.



Figure 2. Structure of R&D expenditure by source of funds



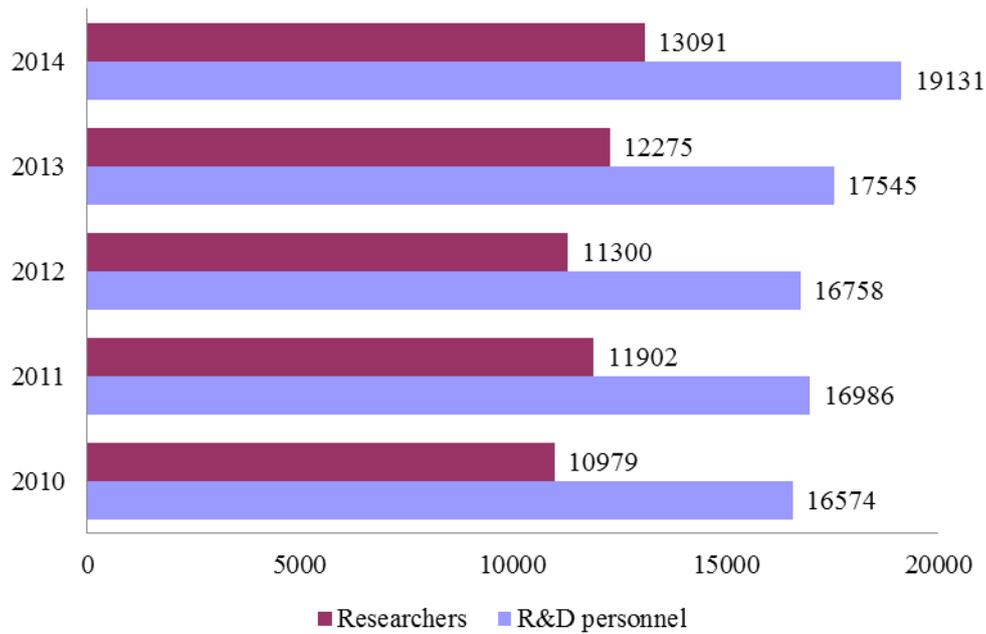
In 2014, the personnel employed with research and development activity amounted to 19 131 persons (in full-time equivalent) which was 9.0% more than in the previous year (Figure 3). The number of researchers, which are the most highly qualified category of scientific staff, also increased by 816 persons or by 6.6% compared to 2013.

The main part of the scientific staff was concentrated in organizations and institutions in the government sector. In 2014, in the same sector 8 711 persons (in full time equivalent) was employed or 45.5% of the total R&D personnel. 5 064 persons were engaged with scientific research and development in higher education sector and their relative share was 26.5%. In the business enterprise sector 5 230 persons were engaged with scientific activity which accounts for 27.3% of the total R&D personnel in 2014.

The growth rate in 2014 compared to 2013 of business R&D expenditure (34.4%) and R&D personnel in business sector (35.7%) is mostly due to the foreign affiliate companies performing R&D in 2014.



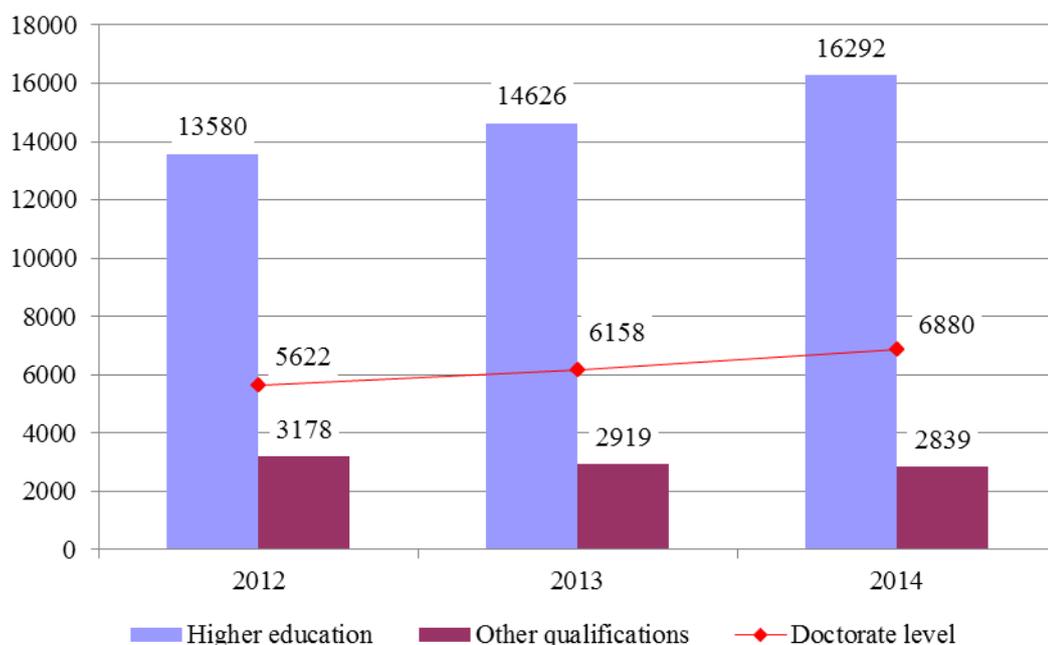
Figure 3. R&D personnel (in full-time equivalent)



In 2014, the structure of R&D personnel by qualification is characterized by increase of the share of persons employed with higher education in total R&D personnel - from 83.5% in 2013 to 85.2% in 2014. Almost half of the researchers (42.2%) hold a doctorate degree (Figure 4).



Figure 4. R&D personnel (in full-time equivalent) by qualification



Regional distribution of research and development activity performed in 2014 shows the leading role of Yugozapaden region, followed by Severoiztochen region and Yuzhen tsentralen region.

2. R&D by regions, 2014

Regions	R&D expenditure (Thousand BGN)	R&D personnel (full-time equivalent)
Total	656.1	19131
Severozapaden	11.9	782
Severen tsentralen	10.3	1336
Severoiztochen	33.1	1801
Yugoiztochen	27.1	987
Yugozapaden	545.5	12828
Yuzhen tsentralen	28.2	1397



Methodological notes

Research and development activity (R&D) comprises any creative work undertaken on a systematic basis in order to increase the volume of knowledge, including knowledge of man, culture and society, and the use of this 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 expenditure for R&D performed within a statistical unit, whatever the source of funds. The R&D expenditure comprises current costs and capital expenditure on R&D.

The indicator 'R&D personnel' measures the human resources employed directly in R&D activity, responsible for creation, application and dissemination of new knowledge. R&D personnel include all persons engaged directly in R&D, as well as those providing direct services (R&D managers, administrators and clerical staff). R&D personnel comprise researchers and other R&D personnel. Personnel in full-time equivalent (FTE) are calculated on the basis of working time spent on R&D activity during the reference year.

According to the methodological manual 'Frascati' (Proposed standard practice for surveys on research and experimental development - Frascati Manual, OECD, 2002), adopted by Eurostat, 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.