

R&D statistics 2015 for the higher education sector in Norway

R&D expenditure at Norwegian universities, university colleges and university hospitals amounted to 18.7 billion NOK in 2015. This is an increase of 2.7 billion from 2013. Adjusted for wages and prices, this implies a real growth of 11 per cent between 2013 and 2015, and close to 9 per cent growth from 2014 to 2015.

Increase in capital expenditure and wages

There was a slight increase in the shares of capital expenditure and wages compared to the latest survey for 2013. Current expenditure amounted to 92 per cent of R&D expenditure, while capital costs accounted for 8 per cent in 2015. Construction activity in connection with the co-location of the Norwegian University of Life Sciences (NMBU) and the Norwegian School of Veterinary Science (NVH) explains a part of the growth in capital expenditure. Wages accounted for 58 per cent in 2015, a slight increase from 56 per cent in 2013. Scientific equipment expenditure increased from NOK 420 million in 2013 to nearly 520 million in 2015.

Table 1 R&D expenditure in the higher education sector in Norway in 2015, by type of institution and source of funds. Mill. NOK.

	Industrial	Government		Other	Abroad		Total
Institution type	sector	Total	Of which: Norwegian Research Council	sources	Total	Of which: EU comm.	
Universities	447	11 067	2 278	392	492	376	12 398
Specialized univ. inst. and more	48	1 062	68	17	10	7	1 138
University colleges	53	1 877	219	33	36	26	1 999
University hospitals	38	2 915	217	197	24	-	3 174
Total	586	16 922	2 782	639	561	409	18 709
Per cent	3.1	90.4	14.9	3.4	3.0	2.2	100.0
Real growth in per cent. 2013-2015	-15.6	11.3	6.9	27.3	21.1	20.2	11.0

Source: NIFU/R&D statistics

Government funding dominates in the higher education sector

Government accounted for 90 per cent of total R&D funding in 2015 (89 per cent in 2013). This includes general university funds (GUF), funding from the Research Council, and income from other government agencies and institutions. Funding from the Norwegian Research Council accounted for 15 per cent of total R&D. Abroad, industries, and other sources (grants, gifts and own revenues) funded 3 per cent of the sector's R&D activities. Funding from the EU rose from 320 million in 2013 to 410 million in 2015.

Stronger growth from 2013 to 2015 than in the preceding two-year period

Overall, there was a real increase in the sector's R&D expenditure from 2013 to 2015 of 11 per cent. The corresponding growth from 2011 to 2013 was less than five per cent. In 2015, public funding increased the most in absolute terms, with over 2 billion NOK by 2013. The growth in public funds was at the same level as overall sector growth. General university funds (GUF) had a real growth of 13 per cent from 2013 to 2015. Funding from ministries etc. other than GUF, had a 3 per cent real growth. Research Council funding increased by more than 300 million NOK, or 7 per cent, after a real decline in the preceding two-year period. Funding from the industrial sector decreased by

90 million NOK, corresponding to a real decline of more than 15 per cent over the two years. The largest percentage growth in fixed prices between 2013 and 2015 was for other sources (27 per cent), abroad (21 per cent), as well as counties and municipalities (23 per cent).

Institutional changes

In Norway, there is an ongoing policy towards merging higher education institutions into larger institutions, also including some research institutes. R&D statistics for 2015 are presented according to the institutional landscape of the Norwegian higher education sector in 2015.

State university colleges share of R&D expenditure increased from 9 to 11 per cent from 2013 to 2015. The universities' share was 66 per cent in 2015, the same as in 2013. University hospitals, which according to international guidelines, are included in the higher education sector, accounted for 17 per cent of R&D expenditure in 2015. Their share is almost unchanged compared to 2013. R&D at specialized R&D institutions fell from 7.5 to 6 per cent.

1,200 more R&D full time equivalents (FTE)

24,600 researchers (head count) participated in R&D in the higher education sector in 2015, 48 per cent of whom were women, up from 47 per cent in 2013. About 14,000 R&D FTE were performed in the sector in 2015, of which 11,000 R&D FTE were carried out by researchers. Other FTEs includes technical or administrative personnel. This gives an overall growth of just over 1,200 R&D FTEs from 2013 to 2015. Researchers accounted for two thirds of the R&D FTE growth and technical and administrative staff for one third.

Mill. NOK 7 000 2013 2015 6 000 5 000 4 000 3 000 2 000 1 000 0 Humanities Social sciences Natural Engineering and Medical and Agricultural sciences technology Health sciences sciences

Figure 1 Current R&D expenditure in the higher education sector in 2013 and 2015, by field of science. Mill. NOK.

Source: NIFU/R&D statistics (link to data)

Medical and health sciences was the largest field of science

In 2015, more than one third of current expenditure for R&D is attributable to units operating within the medical and health sciences. This was a slightly higher proportion than in 2013, and half the expenditure concerned university hospitals. In absolute numbers, the growth from 2013 to 2015 was close to one billion NOK for this field of science. Social sciences increased from 23 per cent of R&D expenditure in 2013 to 25 per cent in 2015. The increase is mainly due to growth at Oslo and Akershus University College of Applied Sciences (HiOA) as a result of mergers. Natural sciences

¹ For 2015 procedure for the collection of administrative data to produce R&D statistics have been changed. This may have influenced the results, i.e. regarding the distinction between different external funding sources.

accounted for 17 per cent of R&D expenditure (18 per cent in 2013). As shown in Figure 1, R&D expenditure in the humanities decreased, while there was a low nominal growth in engineering and technology. Agricultural sciences were the smallest field of sciences, with 2 per cent of the sector's expenditure on R&D.

The largest real increase, however, could be observed in agricultural sciences, followed by social sciences, medicine and health sciences, and natural sciences. R&D in humanities and engineering and technology decreased in real terms from 2013 to 2015.

More results can be found at the <u>R&D-statistics databank</u>. Questions regarding the R&D surveys of the higher education sector might be directed towards <u>Kaja.Wendt@nifu.no</u>, phone number: + 47 996 31 554.

The national R&D statistics for Norway are prepared and published annually on commission by The Research Council of Norway. NIFU is responsible for the higher education sector and the institute sector, while Statistics Norway is responsible for the industrial sector.

NIFU is also responsible for compiling the sector data into the total R&D statistics for Norway, and to report statistics to international organisations and agencies. The statistics are prepared on the basis of the OECD guidelines, as published in the Frascati manual. The R&D statistics are reported to the OECD databases for Science&Technology as well as to Eurostat.

Enquiries on the higher education sector may be addressed to Kaja.Wendt@nifu.no, phone +47 996 31 554 on the institute sector to Bo.Sarpebakken@nifu.no, phone +47 960 94 042, and on the hospitals to Ole.Wiig@nifu.no, phone +47 960 94 024. Enquiries on R&D in the industrial sector may be addressed to Frank.Foyn@ssb.no, phone +47 21 09 46 88, or Harald.Fondevik@ssb.no, phone +47 21 09 47 51.

The national R&D statistics for Norway are published by NIFU http://www.nifu.no/ and Research council of Norway http://www.forskningsradet.no/. More information on the industrial sector is available on http://www.ssb.no/