

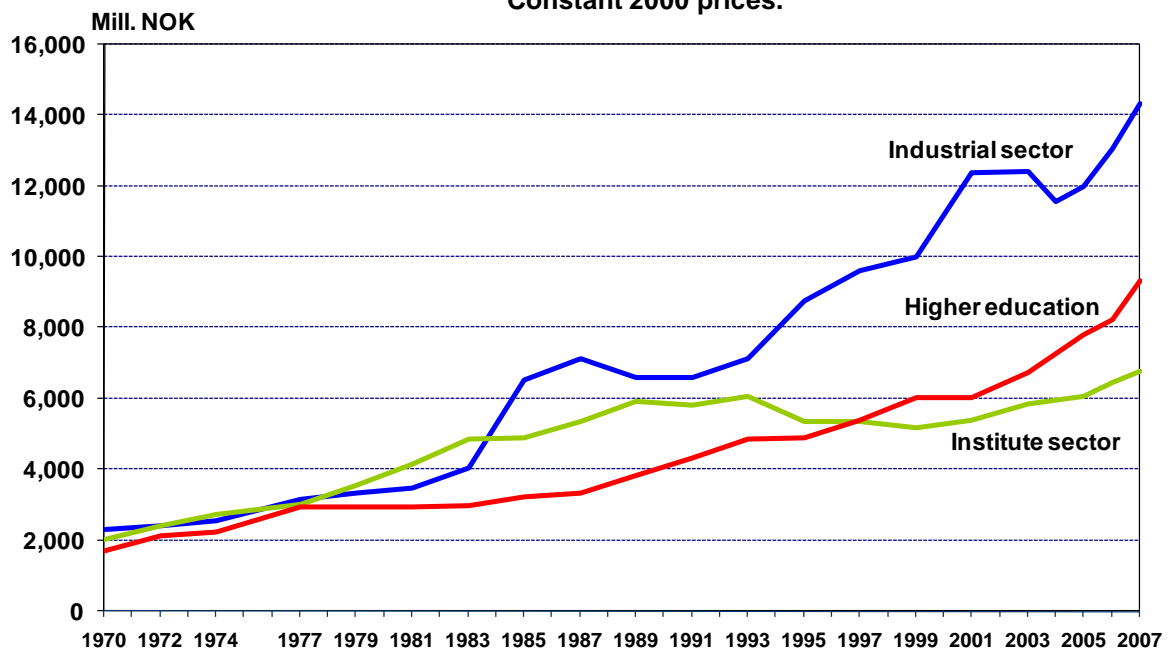
Substantial increase in R&D expenditure in Norway in 2007

The statistics on domestic expenditure for research and experimental development (R&D) show that the total R&D expenditure in Norway amounted to 37.4 billion NOK in 2007. (As of 6.January 2008 100 NOK is equivalent to 10.63 EUR or 14.27 USD.) This is more than a 7.7 billion NOK increase compared to 2005. The increase distributes as follows on the performing sectors: 3.7 billion NOK in the industrial sector, 1.4 billion NOK in the institute sector, and 2.6 billion NOK in the higher education sector. The number of person-years performed in R&D in 2007 amounted to 34000, which is approximately 3600 more than in 2005.

Considerable increase in real value

Measured in constant 2005 prices the total Norwegian R&D expenditure increased by 8.2 per cent on average per year in 2007 compared to 2005. A minor part of the increase is due to extended and improved data coverage of the hospital thrusts, that is hospitals and other specialist health care services. Adjusted for this coverage, the average annual increase 2005-2007 amounts to 7.4 per cent. This increase is substantially higher than the corresponding increase in the 2003-2005 period, which was only 1.7 per cent.

Intramural R&D expenditure in Norway 1970-2007, by sector of performance.
Constant 2000 prices.



Source: NIFU STEP and Statistics Norway

Substantial increase in the higher education sector and in the industrial sector

Intramural R&D expenditure in Norway in 2005, 2006 and 2007 by sector of performance. Billion NOK. Current prices.

Sector of performance	2005		2006		2007	
	Bill. NOK	Percentage	Bill. NOK	Percentage	Bill. NOK	Percentage
Industrial sector	13.6	46.0	15.2	46.5	17.5	46.7
Institute sector	6.9	23.3	7.7	23.3	8.3	22.1
Higher education sector	9.1	30.7	9.9	30.2	11.7	31.2
Total	29.6	100.0	32.8	100.0	37.6	100.0
Percentage of GDP	1.52		1.52		1.65	

Source: NIFU STEP and Statistics Norway

Estimated figure for Higher education sector 2006.

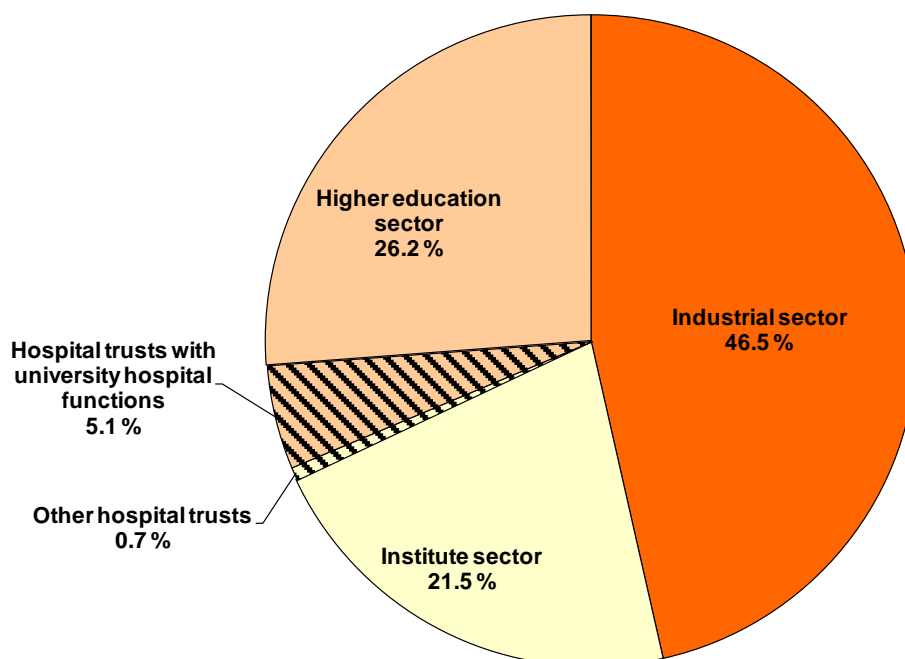
Measured in constant prices the increase in the higher education sector amounted to (on average) 9.6 per cent annually in 2007 compared to 2005. The increase was roughly the same in current expenditure and capital expenditure. Adjusted for the expanded data basis concerning the hospital trusts, the average annual increase was 7.3 per cent.

The growth was high also in the industrial sector, in real value 9.5 per cent between 2006 and 2007 and 8.6 per cent annually compared to 2005.

In the institute sector the increase was somewhat lower than in the other two sectors, i.e. 5.5 per cent average annual increase in real value R&D expenditure between 2005 and 2007 (adjusted for the hospital trusts in the sector: 4.9 per cent). The increase in the institute sector was 20 per cent in R&D capital expenditure and 5 per cent in R&D current expenditure.

Hospital trusts

R&D expenditure in Norway in 2007



Source: NIFU STEP and Statistics Norway

2007 is the first year of total integration of the R&D survey on hospital trusts within the regular R&D surveys of the higher education and institute sectors. Technically, hospital trusts functioning as university hospitals are included in R&D statistics for the higher education sector, while other hospital trusts are classified in the institute sector, see the above diagram. The total R&D expenditure of the hospital trusts amounted to almost 2.2 billion NOK in 2007, of which 1.9 billion NOK is attributed to the higher education sector and less than 0.3 billion NOK to the institute sector.

Increase in R&D person-years

R&D person-years in Norway in 2005, 2006 and 2007 by sector of performance

Sector of performance	2005		2006		2007	
	Number	Percentage	Number	Percentage	Number	Percentage
Industrial sector	13 815	45.3	14 395	45.3	15 262	44.8
Institute sector	7 276	23.8	7 500	23.6	7 796	22.9
Higher education sector	9 420	30.9	9 870	31.1	11 011	32.3
Total	30 511	100.0	31 765	100.0	34 069	100.0

Source: NIFU STEP and Statistics Norway

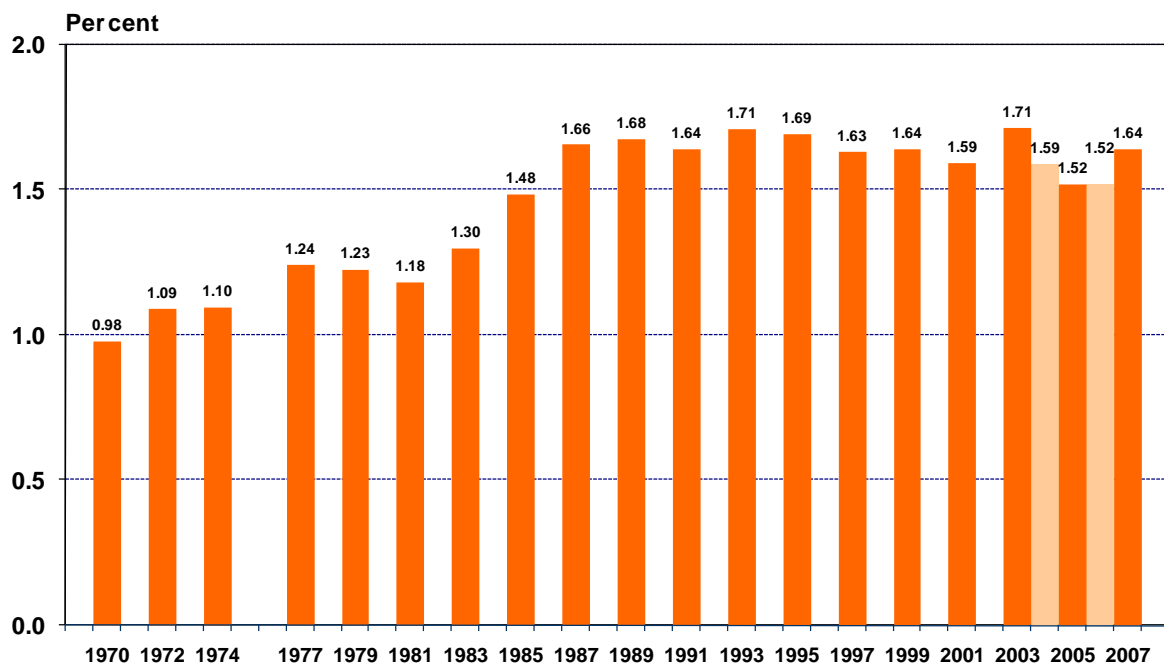
Estimated figure for Higher education sector 2006.

The table includes both researchers and administrative and supportive staff.

Altogether 34 100 R&D person-years were performed in Norway in 2007, which is an increase of 3600 compared to 2005. The distribution of the total number of person-years in 2007 is as follows: the industrial sector 45 per cent, the higher education sector 32 per cent, and the institute sector 23 per cent. About half the total increase took place in the higher education sector. The extended data coverage of the hospital trusts explains a minor part of the increase.

Increased GDP percentage

Intramural R&D expenditure in Norway 1970-2007 as a percentage of GDP.



Source: NIFU STEP and Statistics Norway

The R&D expenditure as a percentage of the gross domestic product (GDP) amounted to 1.64 in 2007. This is an increase compared to 2005 and 2006. In both these years the ratio

was 1.52 per cent. The R&D/GDP ratio was 0.73 per cent for governmental funded R&D and 0.91 per cent for R&D funded by industry/abroad/other sources.

Increased governmental funding

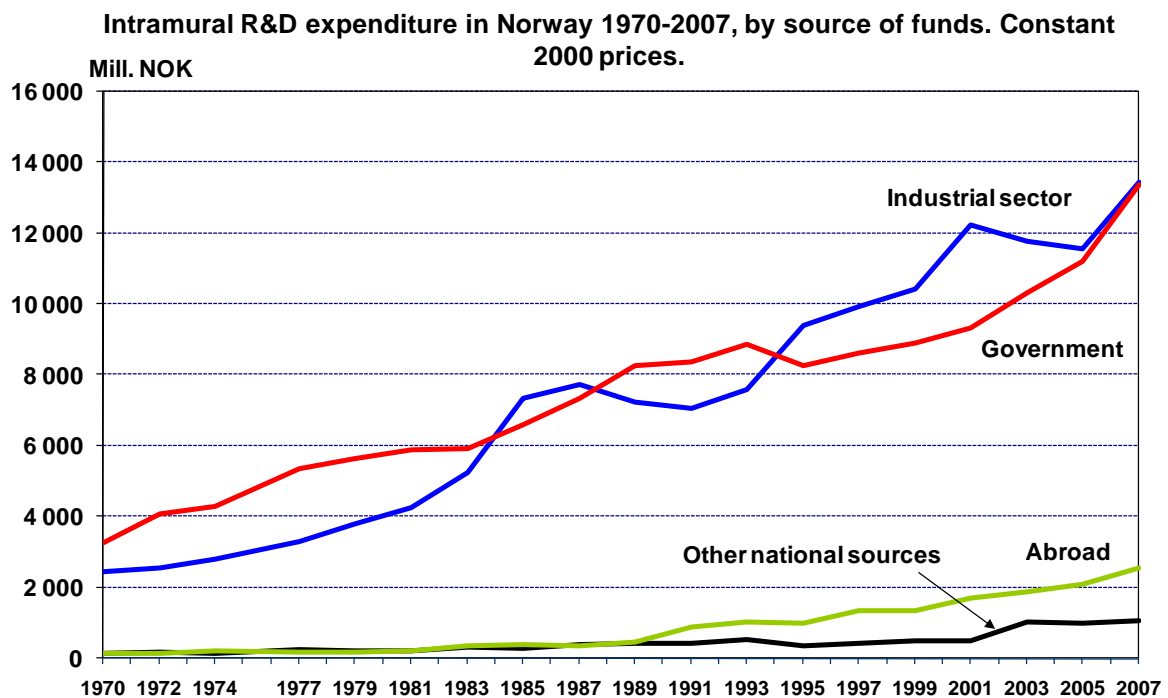
R&D expenditure in 2007 by sector of performance and source of funds. Billion NOK and percentage.

Sector of performance	Industry	Government		Other national sources	Abroad	Total
		Total	Hereof: The Research Council of Norway			
Industrial sector	14,3	0,8	0,3	0,4	2,0	17,5
%	82	5	2	3	11	100
Institute sector	1,8	5,4	1,9	0,3	0,9	8,3
%	21	65	23	4	10	100
Higher education sector	0,5	10,4	2,0	0,5	0,3	11,7
%	4	89	17	5	2	100
Total	16,5	16,6	4,2	1,3	3,1	37,6
%	44	44	11	3	8	100

Source: NIFU STEP and SSB

Funds from the tax deduction system ("Skattefunn") are included in *Other funds* in the Industrial sector. The figures for Industrial sector are preliminary.

The share of total R&D expenditure (GERD) funded by industry amounted to 16.4 billion NOK. More than 80 per cent of the R&D funded by industry was spent in the industrial sector itself. The government's share of the total R&D expenditure increased marginally from 43.6 per cent in 2006 to 44.4 in 2007. Note should be made that the effect of the tax deduction instrument "Skattefunn" – slightly below 450 mill. NOK in 2007 – is classified neither as industrial nor governmental funds, but as "other national sources".



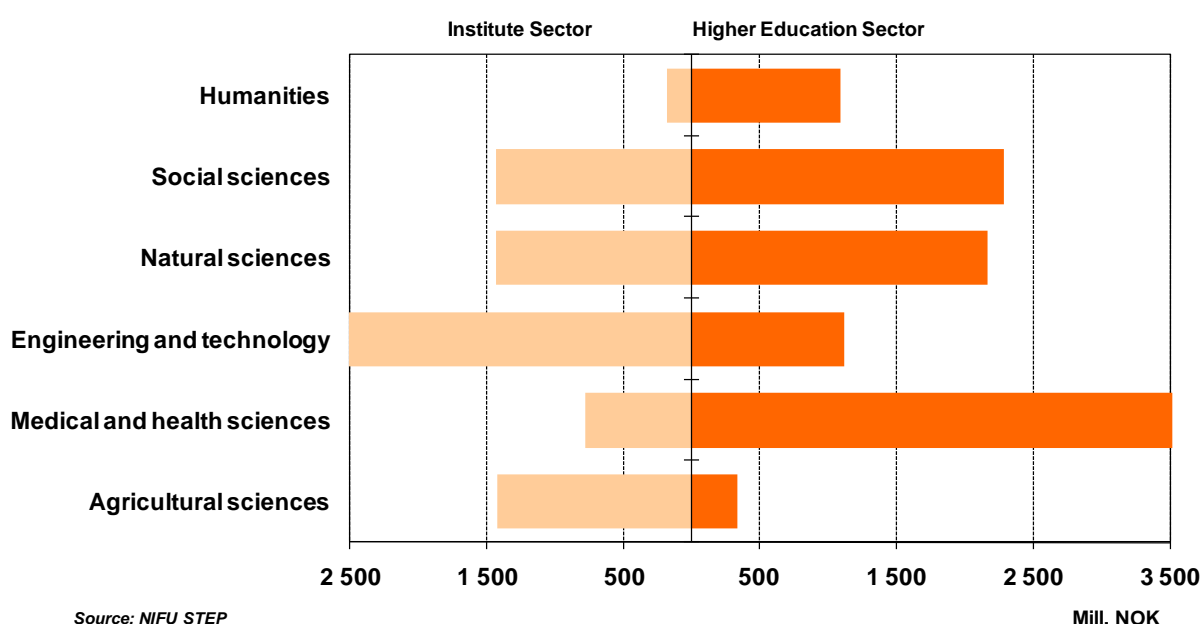
Source: NIFU STEP and Statistics Norway

Field of science distribution

In the higher education and institute sectors the R&D activities are classified according to fields of science. Most of the research in the humanities takes place at universities and colleges. The same goes for R&D in medical and health sciences. On the other hand, a large share of social science research in Norway takes place in the institute sector. As for the natural sciences the R&D expenditure is almost as large in the institute sector as at the universities and colleges. The institute sector is dominant when it comes to R&D in technology and engineering and in the agricultural sciences.

The R&D activities in industrial sector are not classified according to fields of science. However, development activities in technology and engineering are presumed to hold a large proportion. R&D in the pharmaceutical industry makes an important contribution to medical research.

Current expenditure on R&D in Norway in 2007 by field of science and sector of performance.



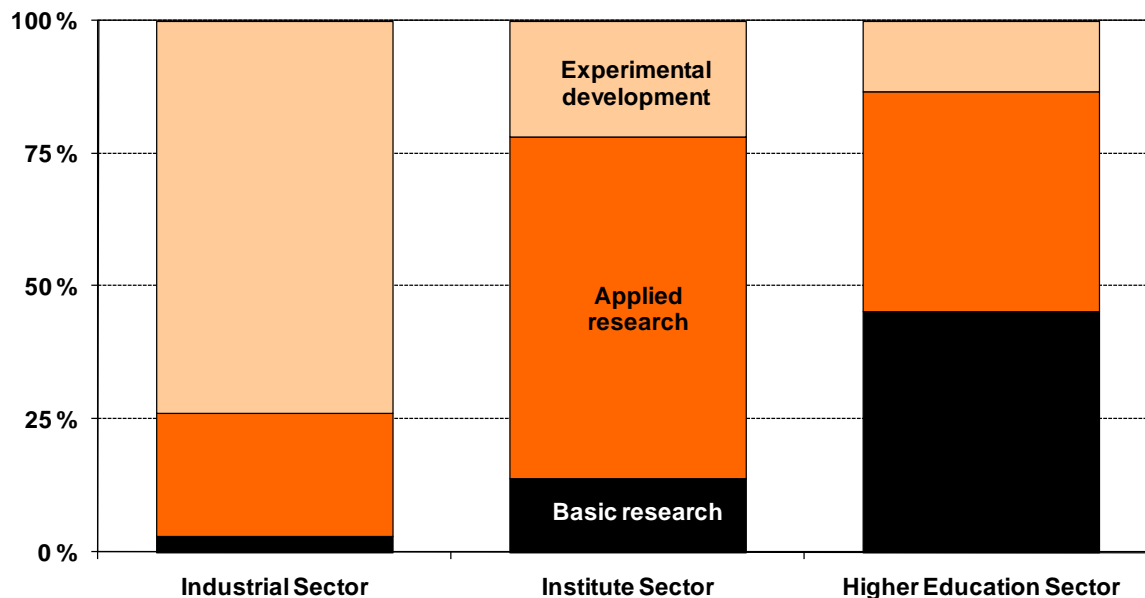
Compared to 2005 the largest increase occurred in the medical and health sciences – considering the higher education sector and the institute sector as a total –, 13.1 per cent in constant prices (average per year). Some of this increase can be attributed to the expanded data coverage of the hospital trusts as mentioned above. The agricultural sciences had the lowest real increase, 3.9 per cent (annual average), while the percentages in the other fields vary between 5.5 and 7.5.

Distribution according to types of R&D activity

In 2007 18 per cent of the current R&D expenditure was classified as basic research, while applied research amounted to 37 per cent and experimental development to 45 per cent. Three fourths of all basic research in Norway in 2007 was performed in the higher education sector. Nevertheless, the basic research amounted to less than half of the total R&D in this sector. The institute sector covered a considerable portion of applied research, even if a lot of the applied research was performed also in the other two sectors. For example, more than 40 per cent of the total R&D in the higher education sector was classified as applied research. Most of the experimental development activities took place in the industrial sector, in which only a small amount of the R&D expenditure was classified as basic research.

The basic research percentage of the higher education sector decreased from 49 in 2005 to 45 in 2007. Again, this is an effect of the extended coverage of the hospital trusts in the R&D statistics. The hospital trusts generally have a relatively low percentage of basic research.

Current expenditure on R&D in Norway in 2007 by type of activity and sector of performance. Percentage.



Source: NIFU STEP and Statistics Norway

The national R&D statistics for Norway are prepared and published annually on commission by The Research Council of Norway. NIFU STEP is responsible for the higher education sector and the institute sector, while Statistics Norway is responsible for the industrial sector. NIFU STEP 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 basis of the OECD guidelines published in the so-called Frascati manual. The R&D statistics are reported to the OECD data bases for Science & Technology as well as to Eurostat.

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The national R&D statistics for Norway are published by NIFU STEP <http://www.nifustep.no/english/> and the Research Council of Norway <http://www.forskningsradet.no/>. More information on the industrial sector is available on <http://www.ssb.no/english/>.
