22. December 2006
(Including subsequent updates 30. April, 24. July, 12. October 2007 and 12. December 2007)

Information from the Norwegian R&D statistics

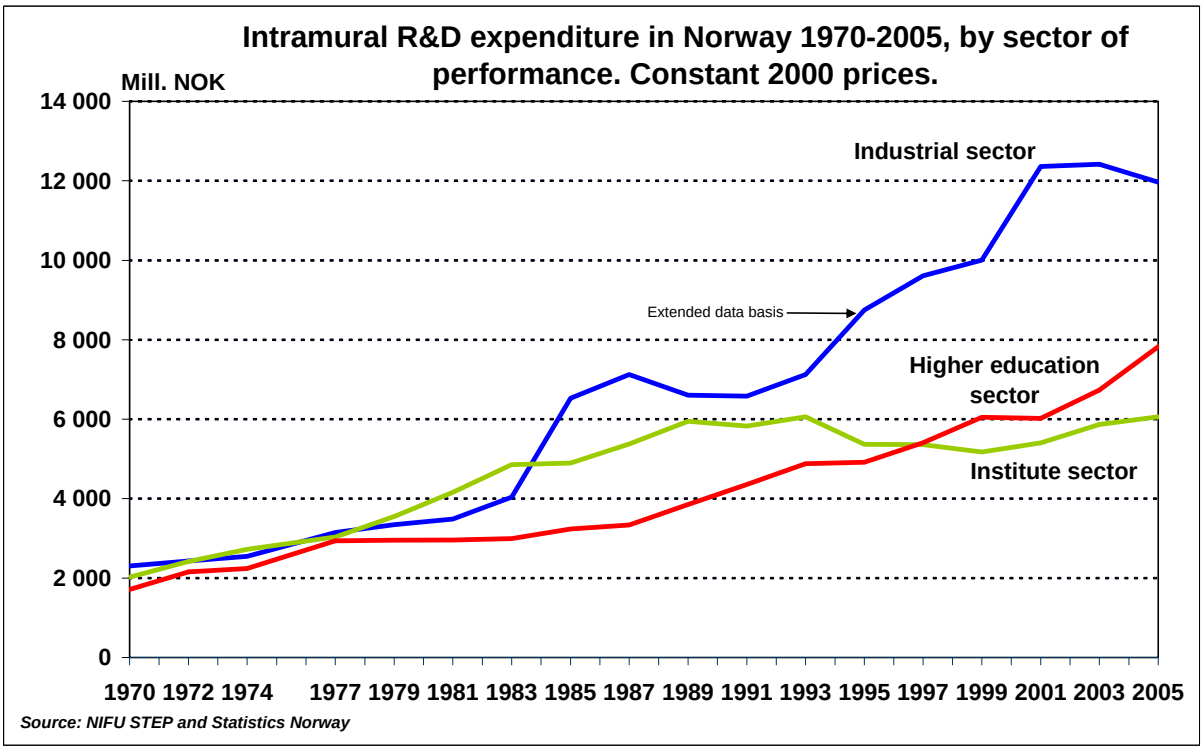
MAIN RESULTS

Close to 30 billion NOK for R&D expenditure in Norway in 2005

The statistics on domestic expenditure for research and experimental development (R&D) show that the total R&D expenditure in Norway amounted to 29.6 billion NOK in 2005. (As of 22.December 2006 100 NOK is equivalent to about 11.97 EUR or 15.76 USD.) This is more than a 1.8 billion NOK increase compared to 2004 and 2.3 billion more than in 2003. The increase from 2003 distributes as follows on the performing sectors: 0.2 billion NOK in the industrial sector, 0.5 billion NOK in the institute sector, and 1.6 billion NOK in the higher education sector. The number of person-years performed in R&D in 2005 increased by 1450 compared to 2003.

Moderate increase in real value

Measured in constant 2003 prices the total Norwegian R&D expenditure increased by 3.4 per cent in 2005 compared to 2003, or by 1.7 per cent on average per year. This increase is slighter than in the 2001-2003 period, when the annual increase in constant prices amounted to 2.7 per cent on average and considerable lower than in the previous two years period 1999-2001 when the corresponding percentage amounted to 5.9.



Substantial increase in the higher education sector, minimal in the industrial sector

Intramural R&D expenditure in Norway in 2003, 2004 by sector of performance. Billion NOK. Current prices.

	2003		2004		2005	
Sector of performance	Bill. NOK	Percentage	Bill. NOK	Percentage	Bill. NOK	Percentage
Industrial sector	13.5	49.3	12.9	46.6	13.6	46.0
Institute sector	6.4	23.3	6.6	23.8	6.9	23.3
Higher education sector	7.5	27.4	8.2	29.6	9.1	30.7
Total	27.3	100.0	27.8	100.0	29.6	100.0
Percentage of GDP	1.71		1.59		1.53	

Source: NIFU STEP and Statistics Norway
Estimated figure for HE sector 2004.

In the industrial sector there was a decrease in real value R&D expenditure in 2005 compared to 2003. However, the R&D efforts in this sector display more variations than do the other two sectors of R&D performance. In constant prices the industrial sector had a 6.9 decrease in R&D expenditure between 2003 and 2004, while there was a 3.5 increase in 2005 compared to 2004. The 2004 decrease was primarily due to a reduction in the R&D investments – the capital expenditure in constant prices had a 31 per cent decrease during the two years period 2003-2005. Also the R&D salary expenditure shows a decrease, although small.
In the institute sector[1] there was a 3.4 increase in real value R&D expenditure between 2003 and 2005. The increase in the institute sector applies to the current expenditure, while the capital expenditure shows a decrease.
On the other hand, in the higher education sector the recorded R&D expenditure in 2005 were considerably larger than in 2003. This goes for the current expenditure as well as the capital expenditure. Some of the increase is attributed to changes in the data basis at the university hospitals. However, the bigger part of the increase is real. Adjusted for the university hospitals the average annual increase in constant prices amounted to 5.6 per cent between 2003 and 2005.

Increase in R&D person-years

R&D person-years in Norway in 2003, 2004 and 2005 by sector of performance

	2003		2004		2005	
Sector of performance	Number	Percentage	Number	Percentage	Number	Percentage
Industrial sector	13,901	47.8	14,025	47.2	13,815	45.3
Institute sector	7,238	24.9	7,220	24.3	7,276	23.8
Higher education sector	7,918	27.2	8,500	28.6	9,420	30.9
Total	29,057	100.0	29,745	100.0	30,511	100.0

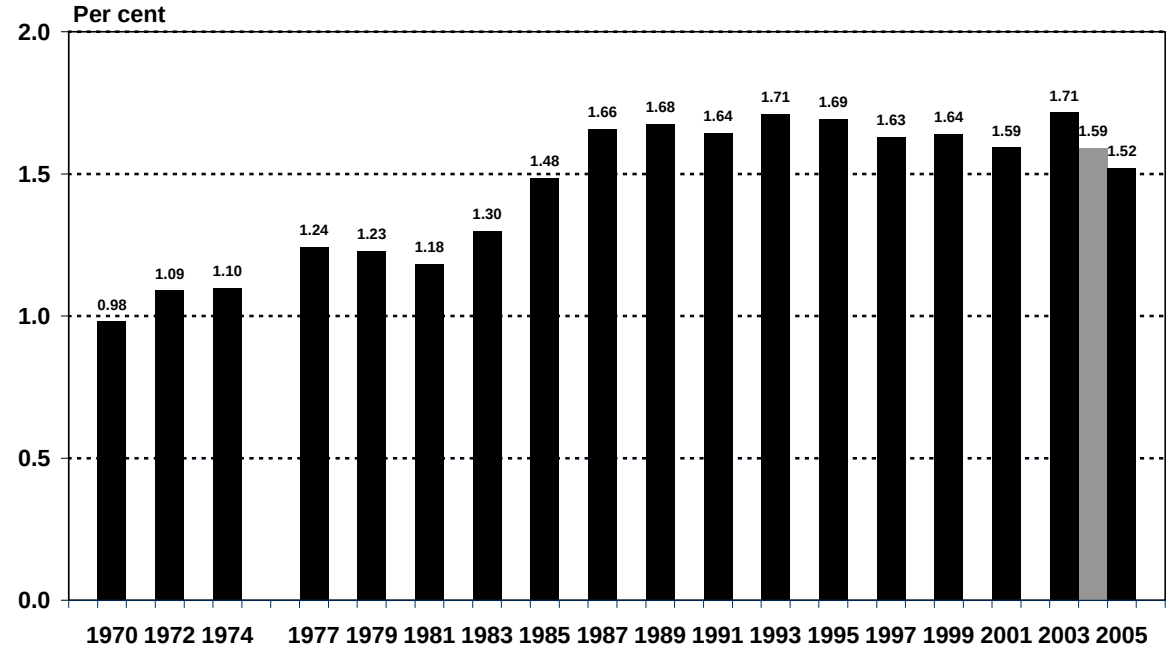
Source: NIFU STEP and Statistics Norway
Estimated figure for HE sector 2004.
The table includes both researchers and administrative and supportive staff.

Altogether 30500 R&D person-years were performed in Norway in 2005, which is an increase of 1450 compared to 2003. The distribution of the total number of person-years in 2005 is as follows: the industrial sector 45 per cent, the higher education sector 31 per cent, and the institute sector 24 per cent. The total number of R&D person-years increased by 5 per cent from 2003, and the total increase is almost completely due to the higher education sector. The institute sector had a small increase and the industrial sector a small decrease.

[1] The Norwegian sector classification differs to some extent from the OECD classification as defined in the Frascati manual, see the NIFU STEP webside: http://english.nifustep.no/english/content/statistics/r_d_statistics

Decreasing GDP percentage

Intramural R&D expenditure in Norway 1970-2005 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 1.52 in 2005. This is a decrease compared to 2003 and 2004 when the percentage was 1.71 and 1.59 respectively. This can partly be explained by development of the Norwegian GDP, which has had a substantial increase during the last few years. R&D expenditure funded by the government amounted to 0.67 percent of the GDP in 2005, while expenditure funded by industry and from abroad and other sources adds up to 0.86 per cent.

Increased governmental funding

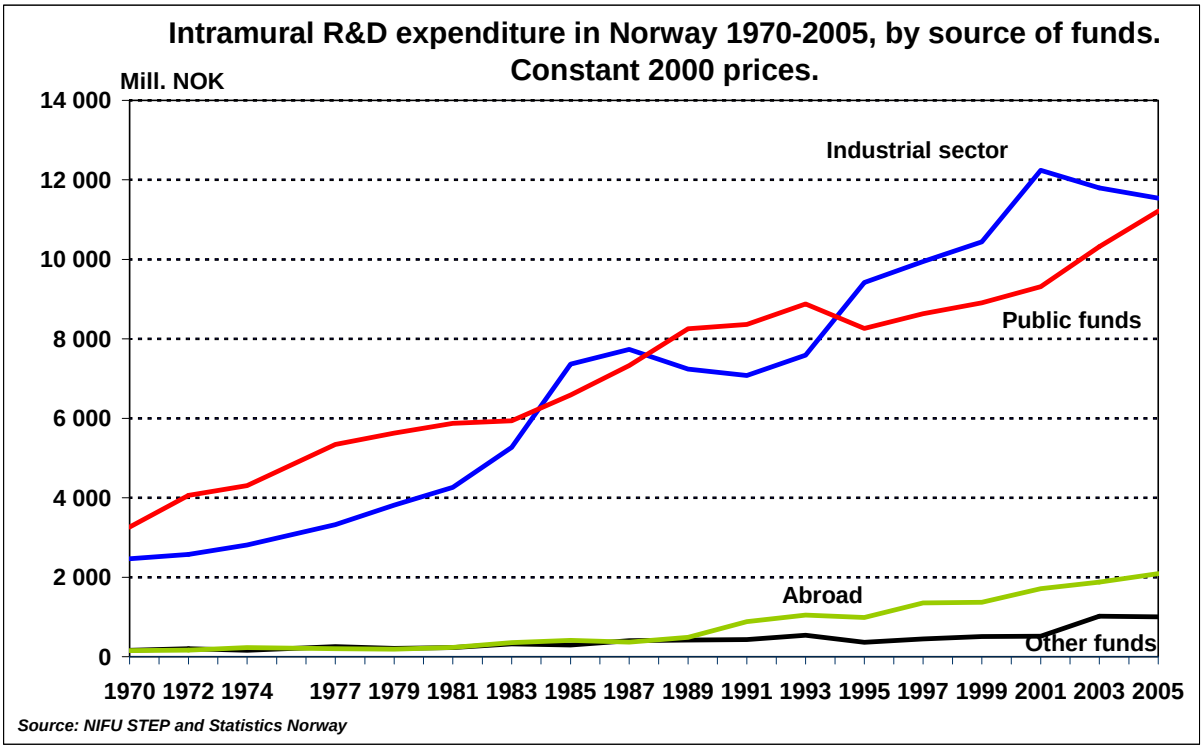
R&D expenditure in 2005 by sector of performance and source of funds. Billion NOK and percentage.

Sector of performance	Industry	Public funding Total	*Hereof: The Research Council of Norway*	Other funds	Abroad	Total
Industrial sector	11,2	0,6	*0,2*	0,5	1,3	13,6
%	82	4	*1*	4	10	100
Institute sector	1,5	4,4	*1,6*	0,2	0,8	6,9
%	22	64	*23*	3	11	100
Higher education sector	0,4	8,0	*1,7*	0,4	0,3	9,1
%	5	88	*18*	5	3	100
Total	13,2	12,9	*3,5*	1,2	2,4	29,6
%	44	44	*12*	4	8	100

Source: NIFU STEP and SSB

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

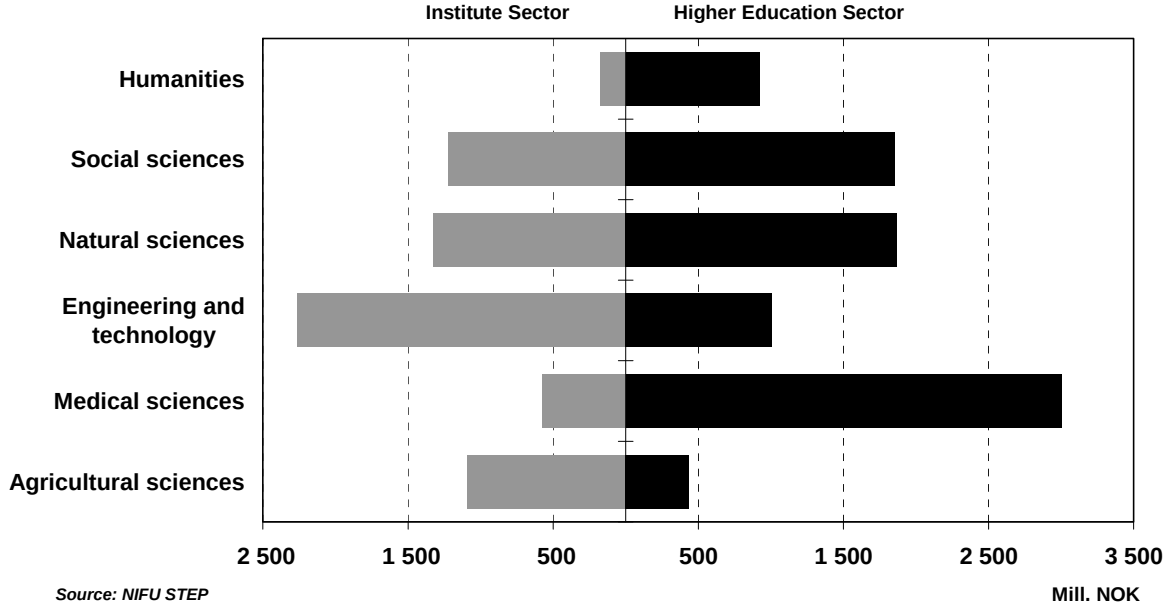
The share of the total R&D expenditure funded by industry amounted to 13.1 billion NOK or 44 per cent in 2005. In relative terms this is a decrease compared to 2003 when the corresponding percentage was 47. More than 85 per cent of the R&D funded by industry was spent in the industrial sector itself. The percentage of the total R&D expenditure funded by public sources increased from 42 in 2003 to 44 in 2005, and consequently almost balances the industrial funding. On should notice, however, that the effect of the tax deduction instrument "Skattefunn" – more than 500 mill. NOK in 2005 – is classified neither as industrial nor public funds, but as "other funds".



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 the medical R&D. On the other hand, a large share of the social sciences research in Norway takes place in the institute sector. As for the natural sciences the R&D expenditures are 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 industry 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 2005 by field of science and sector of performance.



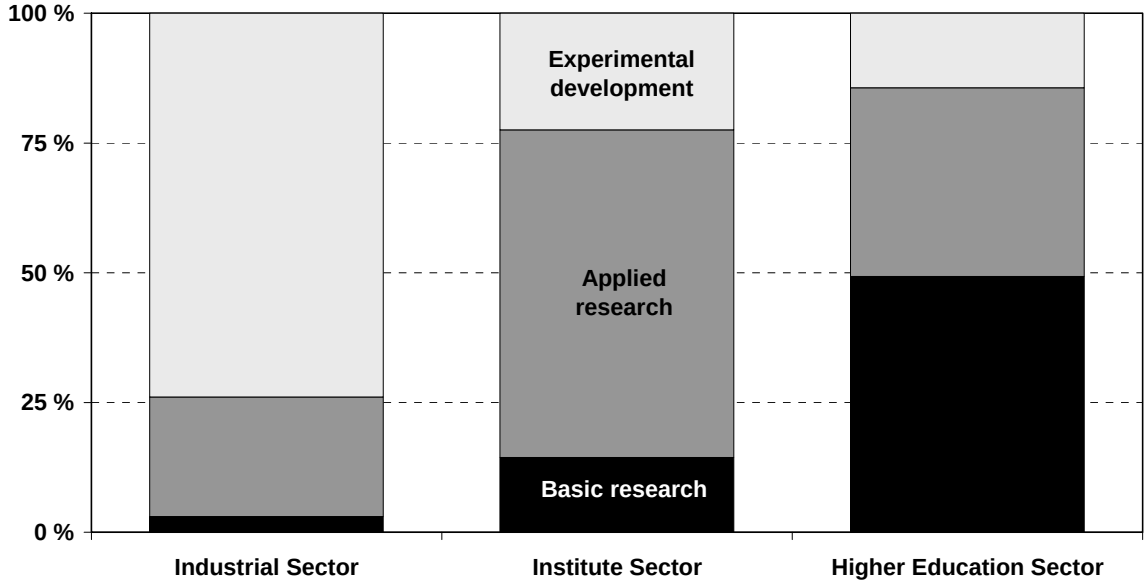
Compared to 2003 the social sciences had the largest increase – considering the higher education sector and the institute sector as a total – with 8.3 per cent in constant 2003 prices. The agricultural science had 8.0 per cent increase. Technology had a minor increase – 2.3 per cent. As for the medical sciences the figures for the two years are not comparable due to the revised data basis at the hospitals.

Distribution according to R&D types

In 2005 close to 20 per cent of the current R&D expenditure was classified as basic research. Applied research took 37 per cent and experimental development 44 per cent. Three fourths of all basic research in Norway in 2005 was performed in the higher education sector. Nevertheless, the basic research amounted to no more than half of the total R&D in this sector. The institute sector occupied a considerable portion of the applied research, even if a lot of applied research was performed also in the other two sectors. For example, one third 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. This sector had only a small amount of basic research.

In all sectors the basic research increased in 2005 compared to 2003. Between the two years the total current R&D expenditure for basic research increased by 16 per cent in constant prices. Also applied research showed an increase, by 12 per cent, while there was a decrease of 3 per cent for experimental development.

Current expenditure on R&D in Norway in 2005 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.

Enquiries on the higher education sector may be addressed to Susanne.Sundnes@nifustep.no, tel. +47 22 59 51 60 and on the institute sector to Bo.Sarpebakken@nifustep.no, tel. +47 22 59 51 63.

Enquiries on R&D in the industrial sector may be addressed to Frank.Foyn@ssb.no, tel. +47 21 09 46 88 or Geir.Soland@ssb.no, tel. +47 21 09 42 99.

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