

Inquiries: Mr Tero Luhtala +358 9 1734 3327, Mr Vesa Hämäläinen +358 9 1734 2594, tiede.teknologia@stat.fi
Director in charge: Ms Kaija Hovi

R&D expenditure estimated to decrease in 2004

In 2003, expenditure on research and development grew by close on EUR 200 million in Finland and exceeded EUR 5 billion. R&D expenditure grew by 4 per cent, i.e. by almost the same amount as one year earlier. The GDP share of R&D expenditure remained unchanged at 3.5 per cent. The data derive from Statistics Finland's statistics on research and development activity in Finland in 2003.

However, according to the data provided by business enterprises and public sector organisations, and on the basis of other calculations, R&D expenditure is estimated to decrease in 2004. In the light of currently available information, R&D expenditure seems likely to go down by EUR 50 million, and its GDP share fall short of the 2000 level.

Finland accounts for only 0.7 per cent of the total R&D expenditure of the OECD countries. The GDP share of R&D expenditure is, nevertheless, high in Finland by international comparison. Among the OECD countries, only Sweden had a higher GDP share (4.3%) than Finland. The shares of Japan (3.1%), Iceland (3.1%), South Korea (2.9%) and the United States (2.7%) were approaching that of Finland. The share was the highest in Israel where expenditure on R&D amounted to 4.7 per cent of GDP in 2002.

Growth will continue in the university sector

In the university sector, R&D expenditure reached nearly EUR 980 million in 2003, which represents 5.5 per cent growth. It is estimated that the growth in 2004 will also amount to more than EUR 50 million. The share of the university sector of all money invested in R&D has been increasing since the year 2000.

By contrast, R&D expenditure in the rest of the public sector fell by EUR 14 million to EUR 515 million in 2003, and is estimated to decline even slightly further in 2004.

Large annual fluctuation in investments of the electronics industry

The R&D expenditure of business enterprises exceeded slightly EUR 3.5 billion in 2003. This represents a growth rate of 4.5 per cent, whereas in 2002 the respective rate was 2 per cent. The growth is explained by the electronics industry, which increased its R&D expenditure by EUR 230 million while the total R&D spending of business enterprises went up by EUR 150 million. Without the additional input of the electronics industry business enterprises' R&D expenditure would have declined by nearly EUR 80 million.

In manufacturing, R&D expenditure decreased in all industries except for the manufacture of electrical and electronic products. The drop was the most substantial in the chemical industry where R&D spending fell from EUR 322 million to EUR 286 million. In the service industries, business services increased clearly their investments in R&D, and data processing services also showed slight growth. The share of the electronics industry of the whole enterprise sector's R&D expenditure reached the record size of 56 per cent.

However, it is estimated that after the rise of 2003 the R&D expenditure of business enterprises will decline by nearly EUR 100 million in 2004. Again, the underlying reason for this is believed to be the electronics industry.

Almost EUR 190 million invested in biotechnology

R&D expenditure on biotechnology accounted for 3.7 per cent of all R&D expenditure in 2003. The share of the branch was the highest, or 8.6 per cent, in the university sector. In the public sector its proportion was 3.2 per cent but in the business enterprise sector only 2.4 per cent. This is the first time R&D expenditure on biotechnology was recorded in these statistics and it amounted to EUR 186 million in all.

Person-years spent on research rose by 4 per cent

During 2003, the number of person-years spent on research and product development rose by 2,200 and totalled of 55,000. Business enterprises accounted for nearly 72 per cent of the increase. In relative terms, however, the fastest growth was recorded in polytechnics where the number of person-years spent on research went up by 19 per cent. Business enterprises accounted for 56 per cent and the university sector for 31 per cent of the total number of person-years.

R&D expenditure (at current prices) in 1997–2003, estimate for 2004, and GDP share of R&D expenditure

| Year | Business enterprises | | Public sector**** | | University sector** | | Total | GDP share of R&D expenditure*** | |
|-------|----------------------|------|-------------------|------|---------------------|------|---------|---------------------------------|---|
| | EUR million | % | EUR million | % | EUR million | % | | EUR million | % |
| 1997 | 1,916.7 | 66.0 | 408.6 | 14.1 | 579.5 | 20.0 | 2,904.9 | 2.71 | |
| 1998 | 2,252.8 | 67.2 | 443.9 | 13.2 | 657.8 | 19.6 | 3,354.5 | 2.88 | |
| 1999 | 2,643.9 | 68.2 | 470.1 | 12.1 | 764.8 | 19.7 | 3,878.8 | 3.23 | |
| 2000 | 3,135.9 | 70.9 | 497.4 | 11.2 | 789.3 | 17.8 | 4,422.6 | 3.40 | |
| 2001 | 3,284.0 | 71.1 | 500.9 | 10.8 | 834.1 | 18.1 | 4,619.0 | 3.41 | |
| 2002 | 3,375.1 | 69.9 | 529.7 | 11.0 | 925.6 | 19.2 | 4,830.3 | 3.46 | |
| 2003 | 3,527.9 | 70.3 | 515.4 | 10.3 | 976.3 | 19.5 | 5,019.7 | 3.52 | |
| 2004* | 3,434.5 | 69.1 | 504.4 | 10.1 | 1,031.9 | 20.8 | 4,970.7 | 3.37 | |

* Estimate based on survey response and other calculations.

** Incl. polytechnics since 1999.

*** GDP 2002 and 2003 preliminary data of Statistics Finland, GDP 2004 forecast of the Ministry of Finance.

**** Incl. private non-profit sector.

Sources: *Tutkimus- ja kehittämistoiminta 2003 (Research and Development in Finland 2003)*. Statistics Finland.
Further information available on the Internet at: http://www.stat.fi/yrlyttiede_en.html
Printed publication due out at turn of the year.