

# National Science Foundation

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Official Business

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## Slow Industrial R&D Spending Growth Continues into 1990s<sup>1</sup>

Company research and development (R&D) funding estimates for 1989 and 1990 call for increases of 4 percent and 5 percent, respectively. Firms are expected to spend \$72 billion of their own funds on R&D activities in 1990, up from \$69 billion in 1989. After adjustment for inflation, however, these levels mean that company R&D spending will be flat from 1988 to 1990.

U.S. industry finished out the last half of the 1980s with a record of real R&D funding changes that is in sharp contrast with the 1980-85 period. In the first half of the decade, company R&D funds grew at an average annual rate of 8.2 percent. Real increases (1982 dollars) in company funding during the last half of the eighties averaged less than one-fifth that rate. The 1989 estimate, in fact, shows a real decrease of 0.9 percent, the first negative figure since 1975; however, the estimate for 1990 shows a real increase of 1.1 percent.

Most of the 72 company officials responding to a National Science Foundation (NSF) survey cited sales and profit levels for 1989 and 1990 as having the greatest influence on company R&D budgets.

In recent years, R&D departments have not been immune from the cost cutting and pressure for efficiency that have pervaded other U.S. corporate divisions. Specialization, rather than diversification, is now the norm in the R&D laboratory as work intensifies on fewer projects. Concerns over the real cost of capital, inflation, and mergers also have affected estimates of R&D spending.

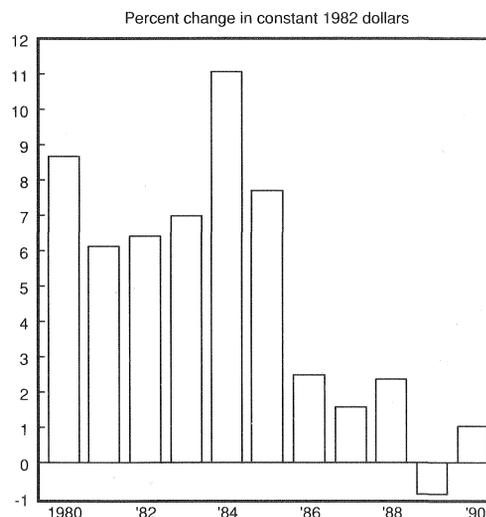
### Mergers

Mergers and acquisitions have limited R&D spending growth to the extent that duplication of effort has been eliminated and corporate funds that might have gone to R&D have been used to pay financial and legal costs. Of the 72 responding companies, almost 30 percent have been involved in mergers or acquisitions since 1984. During the 1988-90 period, these 21 companies experienced an average annual current-dollar decrease in R&D expenditures of 0.2 percent. The comparable figure for the other respondents is an increase of 6.8 percent.

### Industries

Anticipated changes in R&D spending levels by the major R&D-performing industries are very diverse. The chemical industry expects the highest current-dollar R&D spending increases—10 percent in 1989 and 9 percent in 1990. For 1989 and 1990, professional- and scientific-instruments companies estimate increases of 8 percent and 6 percent, respectively; aircraft companies will grow 6 percent and 7 percent, respectively; and machinery/electrical equipment firms forecast increases of 6 percent and 4 percent, respectively. At the low extreme, the motor vehicles industry forecasts a 4-percent reduction in R&D spending in 1989 followed by a 4-percent increase in 1990.

### Company-funded R&D expenditures



SOURCE: National Science Foundation, SRS

<sup>1</sup>The information in this account is based on mail responses to an annual NSF inquiry to its Industrial Panel on Science and Technology, and on interviews with R&D officials in the major R&D-performing industries. Replies were received from 72 of 83 company officials contacted from April through September 1989, and they included 17 of the top 20 R&D-spending U.S. companies. The 72 companies accounted for more than one-half of all U.S. company-funded R&D expenditures.