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Company Funds Pace Industry R&D Growth

U.S. industry increased its R&D expenditures in 1978 by 11 percent to \$33.3 billion, according to preliminary data obtained from industry on 1978 R&D performance.¹ In constant dollars, the increases amounted to 4 percent, the third year of consecutive real growth in industry R&D expenditures.

Approximately two of every three dollars spent by industry for research and development came from companies' own funds, with the remainder representing Federal R&D work contracted to industry. In 1978, expenditures from companies' own funds grew 13 percent (5 percent in real terms), about the same rate of growth as experienced in total sales over 1977. An important factor in company's own funds for R&D performance, which have averaged 4 percent real growth since 1972, is the sharp rise in energy-related R&D expenditures. Since 1972, companies have more than tripled their own funds

¹ These data are based on preliminary findings from the 200 largest R&D-performing companies reporting in the 1978 Survey of Industrial Research and Development.

for energy research and development, reaching a total of \$1.6 billion.

Energy funding has also been a major component of Federal R&D dollars going to industrial firms. The 60 percent increase reported by industry for Federal energy R&D funds in 1978 partially offset the slowdown in growth rates shown for defense and space shuttle R&D expenditures from the Department of Defense and the National Aeronautical and Space Administration. The net effect on total Federal R&D funds to industry in 1978 was an 8 percent increase—1 percent in constant dollars.

A reflection of the constant-dollar increases in industrial R&D funds is the 7-percent growth in industrial R&D scientists and engineers, whose number rose in 1979 to the highest total—426,500. This peak is the result of an approximate 3-percent increase per year experienced since 1972.

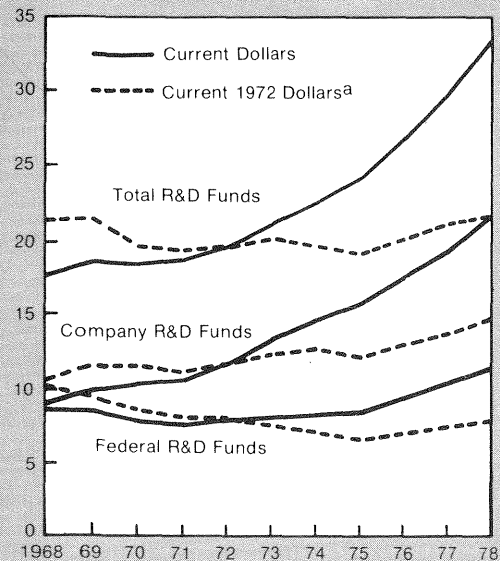
Among the five major R&D performing industries, the motor vehicles industry registered, for the third consecutive year, the largest increase in R&D per-

formance, 14 percent, spurred by a 16-percent rise in this industry's company R&D funds. According to interviews with several companies, this is due primarily to efforts to meet Government regulatory requirements in the areas of fuel economy and exhaust emissions by the early eighties.

Other industries with growth rates exceeding the all-industry average include the electrical equipment and communications industry and the machinery industry, each with 13 percent. The electrical equipment industry's increase was characterized by a 33-percent increase in its energy R&D funds. This industry is the largest performer of energy research and development and administers four Federally funded research and development centers devoted to energy. The machinery industry, which includes most computer manufacturers, has had the highest annual R&D growth rate of the five leading industries since 1972, although its growth since 1975 has been overshadowed by the rate of increase in the motor vehicles industry.

Chart 1. Industrial R&D Performance 1968-78

(Billion of Dollars)

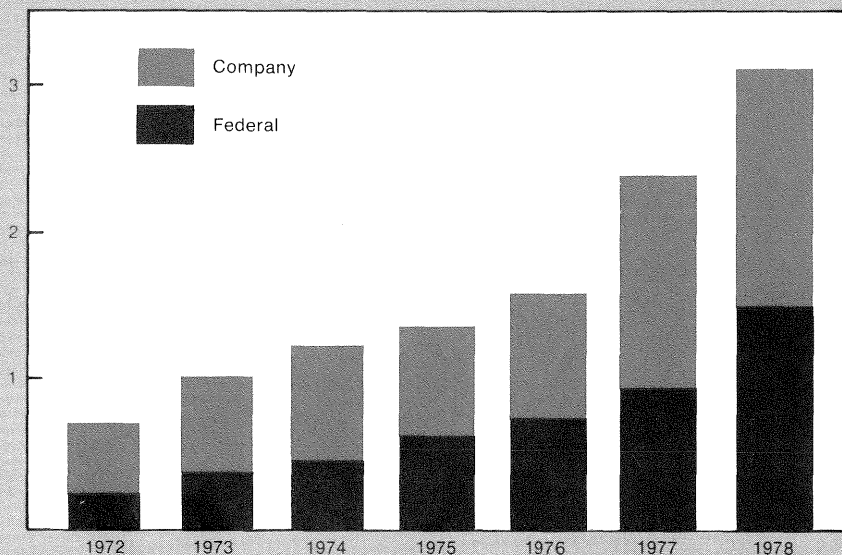


¹ The GNP deflator was used to convert from current to constant dollars.

SOURCE: National Science Foundation

Chart 2. Industrial energy R&D expenditures by source of funds: 1972-78

(Dollars in billions)



SOURCE: National Science Foundation