

DATA BRIEF

Academic R&D Spending Continued to Grow in FY 1995

by M. Marge Machen

Federal Government provided 60-percent share of academic R&D spending for the third consecutive year.

Separately budgeted research and development (R&D) expenditures in academic science and engineering programs continued steady growth in FY 1995, reaching \$22 billion—an increase of 5 percent from 1994 levels. When adjusted for inflation, academic R&D increased 3 percent, slightly less than the 3.5-percent constant dollar average annual growth that was reported during the previous 5 years.

Sources of R&D Funding

Federally financed academic R&D spending increased 5 percent (3 percent in constant dollars) in FY 1995, to \$13 billion. For the third consecutive year, the Federal Government provided 60 percent of the R&D dollars expended at universities and colleges. Ten years earlier, the Federal

share of the academic R&D performance total was 63 percent (table 1).

The 5-percent increase in R&D expenditures from all non-Federal sources combined (3 percent in constant dollars) mirrored Federal and total gains, reaching \$8.8 billion in FY 1995. Funds from State and local governments increased the fastest—6 percent in FY 1995, after little growth in 1994 (less than 1 percent). Institutional funds grew by nearly 6 percent, industry funding was up 5 percent, and funds from all other non-Federal sources (including private foundations and voluntary sources) rose 1 percent.

Total expenditures devoted to basic research at universities and colleges rose to \$14.8 billion, a 5-percent increase over FY 1994, or a 3-percent gain after adjusting for inflation. The Federal Government provided \$9.5 billion, for a 6-percent increase (4 percent in constant dollars). As a result, the Federal share of total basic research increased for the fourth consecutive year, from 61 percent in 1991 to 64 percent in 1995.

Applied research and development activities combined totaled \$7.3 billion in 1995, up 5 percent over 1994 levels. The Federal Government provided 53 percent of the applied R&D total in 1995.

Fields of Research

Academic R&D spending in engineering increased 6 percent over 1994 levels compared to a 5-percent gain for the sciences. All but mathematical sciences grew faster than the 1.8-percent rate of inflation in major science and engineering fields for which data were collected. Rates of growth range from a high of 7 percent in the social sciences to a low of 1 percent in mathematical sciences. Federally financed expenditures kept pace

Table 1. R&D expenditures at universities and colleges, by source of funds

[Millions of Dollars]			
Source and field	Fiscal Year 1995	Fiscal Year 1994	Fiscal Year 1985
Total.....	22,101	21,039	9,687
(In 1987 dollars) ^{1/}	17,307	16,778	10,273
Source of funds:			
Federal Government.....	13,331	12,658	6,064
State and local governments.....	1,655	1,566	752
Industry.....	1,492	1,419	560
Institutional funds.....	4,024	3,815	1,617
All other sources.....	1,599	1,580	694
Character of work:			
Basic research.....	14,811	14,086	6,556
Applied research and development.....	7,291	6,953	3,131

^{1/} Based on the gross domestic product implicit price deflator.

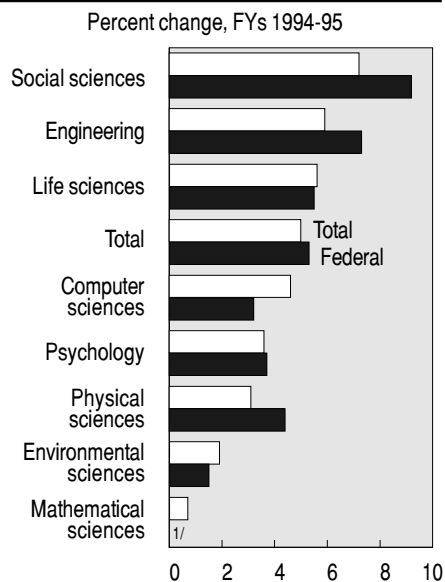
NOTE: Because of rounding, figures may not add to the total shown.

SOURCE: National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges, Fiscal Year 1995

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Chart 1. R&D expenditures at universities and colleges, by field



^{1/}Percent change = 0.0

SOURCE: National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges, Fiscal Year 1995.

with inflation in 6 of the 8 major science and engineering fields (chart 1). Only Federal funding increases for environmental and mathematical sciences fell below the rate of inflation.

Historically, R&D expenditures have been highly concentrated in relatively few institutions. The 100 leading research institutions accounted for 82 percent of Federally financed spending and 80 percent of all R&D dollars in FY 1995. The 20 leading research

Table 2. Twenty institutions reporting the largest academic R&D expenditures in the sciences and engineering: FYs 1994-95

[Millions of dollars]

Institution	Total		Federal	
	Fiscal year	Fiscal year	Fiscal year	Fiscal year
	1995	1994	1995	1994
Total 1/.....	22,101	21,039	13,331	12,658
Total, Leading 20 institutions.....	6,953	6,668	4,796	4,593
1. Johns Hopkins U 2/.....	789	784	706	712
2. University of Michigan.....	443	431	276	265
3. U WI Madison.....	404	393	229	225
4. University of Washington.....	389	354	291	281
5. MA Institute of Tech.....	371	375	274	271
6. Texas A&M University.....	363	356	137	137
7. U CA San Diego.....	357	332	284	266
8. Cornell University.....	344	313	207	194
9. University of Minnesota.....	337	318	195	181
10. Pennsylvania State U.....	331	303	187	169
11. U CA San Francisco.....	330	312	224	213
12. Stanford University.....	319	319	273	269
13. U CA Los Angeles.....	304	280	202	190
14. University of Arizona.....	292	270	169	146
15. U CA Berkeley.....	291	290	158	153
16. Harvard University.....	276	278e	204	190
17. U of Pennsylvania.....	272	251	201	186
18. University of Colorado.....	250	234	170	158
19. Ohio State University.....	246	231	123	113
20. University of IL Urbana.....	246	245	139	139
Total, all other institutions.....	15,148	14,371	8,535	8,065

^{1/}Data do not include R&D performed by university-administered federally funded research and development centers.

^{2/} For FY 1995, includes Applied Physics Laboratory with \$447 million in total and \$434 million in federally-financed R&D expenditures.

NOTE: Because of rounding, figures may not add to the total shown.

KEY: e-estimate

SOURCE: National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges, Fiscal Year 1995

performers represented a 36-percent share of Federally sponsored expenditures and 31 percent of total academic R&D spending (table 2).

This Data Brief was prepared by M. Marge Machen, National Science

Foundation, Division of Science Resources Studies, 4201 Wilson Boulevard, Suite 965, Arlington, VA, 22230. For free printed copies of SRS Data Briefs, write to the above address, call 703-306-1773, or send e-mail to pubs@nsf.gov.

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