

Appendix table 4-19

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**Total (Federal plus company and other) funds for industrial R&D performance in United States, by industry and size of company: 1999–2001**

(Millions of dollars)

Industry and size of company	NAICS codes	Funds		
		1999 <sup>a</sup>	2000	2001 <sup>b</sup>
All industries.....	21–23, 31–33, 42, 44–81	182,711	199,539	198,505
Manufacturing.....	31–33	116,921	124,078	120,705
Food.....	311	1,132	D	1,819
Beverage and tobacco products.....	312	D	417	152
Textiles, apparel, and leather.....	313–16	334	D	D
Wood products.....	321	70	105	182
Paper, printing, and support activities.....	322, 323	D	D	D
Petroleum and coal products.....	324	615	D	D
Chemicals.....	325	20,246	20,918	17,892
Basic chemicals.....	3251	2,746	2,080	1,876
Resin, synthetic rubber, fibers, and filament.....	3252	D	2,852	D
Pharmaceuticals and medicines.....	3254	D	D	10,137
Other chemicals.....	325 minus (3251–52, 3254)	D	D	D
Plastics and rubber products.....	326	1,785	D	D
Nonmetallic mineral products.....	327	D	846	990
Primary metals.....	331	470	624	485
Fabricated metal products.....	332	1,655	1,672	1,599
Machinery.....	333	6,057	6,580	6,404
Computer and electronic products.....	334	35,932	45,097	47,079
Computers and peripheral equipment.....	3341	D	5,162	D
Communications equipment.....	3342	6,003	11,616	15,507
Semiconductor and other electronic components.....	3344	10,701	12,894	14,358
Navigational, measuring, electromedical, and control instruments.....	3345	14,337	15,116	12,947
Other computer and electronic products.....	334 minus (3341–42, 3344–45)	D	310	D
Electrical equipment, appliances, and components.....	335	D	D	4,980
Transportation equipment.....	336	33,965	30,085	25,965
Motor vehicles, trailers, and parts.....	3361–63	D	D	D
Aerospace products and parts.....	3364	14,425	10,319	7,868
Other transportation equipment.....	336 minus (3361–64)	D	D	D
Furniture and related products.....	337	248	284	301
Miscellaneous manufacturing.....	339	3,851	4,206	6,606
Medical equipment and supplies.....	3391	D	D	D
Other miscellaneous manufacturing.....	339 minus (3391)	D	D	D
Other manufacturing.....	31–33 minus (311–16, 321–27, 331–37, 339)	—	—	—
Nonmanufacturing.....	21–23, 42, 44–81	65,790	75,461	77,799
Mining, extraction, and support activities.....	21	D	823	D
Utilities.....	22	142	D	133
Construction.....	23	691	D	320
Trade.....	42, 44, 45	19,616	24,959	24,372
Transportation and warehousing.....	48, 49	460	D	1,848
Information.....	51	15,389	16,830	D
Publishing.....	511	11,302	13,004	13,760
Newspaper, periodical, book, and database.....	5111	371	365	649
Software.....	5112	10,931	12,639	13,111
Broadcasting and telecommunications.....	513	D	1,407 S	D
Radio and television broadcasting.....	5131	D	D	D
Telecommunications.....	5133	D	D	D
Other broadcasting and telecommunications.....	513 minus (5131, 5133)	31	59	D
Other information.....	51 minus (511, 513)	D	2,420	D
Finance, insurance, and real estate.....	52, 53	D	4,025	D
Professional, scientific, and technical services.....	54	18,994	22,577	27,704
Architectural, engineering, and related services.....	5413	3,580	3,381	3,386
Computer systems design and related services.....	5415	D	5,169	9,154
Scientific R&D services.....	5417	10,470	12,892	14,244
Other professional, scientific, and technical services.....	54 minus (5413, 5415, 5417)	D	1,135	920

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(Millions of dollars)

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		1999 <sup>a</sup>	2000	2001 <sup>b</sup>
Management of companies and enterprises.....	55	D	49	381
Health care services.....	621–23	642	536	1,149
Other nonmanufacturing.....	56, 61, 624, 71, 72, 81	D	731	1,259
<b>Company size (employees)</b>				
All companies.....	na	182,711	199,539	198,505
5–24.....	na	7,004	6,862	4,828
25–49.....	na	4,750	5,008	3,750
50–99.....	na	7,225	7,259	8,202
100–249.....	na	7,213	9,020	12,916
250–499.....	na	7,892	7,479	8,702
500–999.....	na	7,032	9,074	10,564
1,000–4,999.....	na	24,840	30,636	26,748
5,000–9,999.....	na	16,376	16,768	17,487
10,000–24,999.....	na	24,922	28,653	27,065
25,000 or more.....	na	75,457	78,779	78,244

— data not collected; D data have been withheld to avoid disclosing operations of individual companies; NAICS North American Industry Classification System; S imputation of more than 50 percent  
na not applicable

<sup>a</sup>Some statistics for 1999 have been revised since originally published.

<sup>b</sup>Beginning with 2001, statistics for total and federally funded industrial R&D exclude data for federally funded research and development centers.

NOTES: R&D in this table is the industrial R&D performed within company facilities funded from all sources. Funds are the company's own; funds from outside organizations, such as other companies, research institutions, universities and colleges, nonprofit organizations, and state governments; and funds from the Federal Government. Excluded from this table are R&D not performed within the company (e.g., R&D contracted out to other organizations) and R&D not performed in the United States (e.g., R&D not performed on U.S. soil by foreign subsidiaries or other foreign organizations).

For 1999, 2000, and 2001, the frame from which statistical samples were selected was divided into two partitions based on total company employment. In the manufacturing sector, companies with 50 or more employees were included in the large company partition. In the nonmanufacturing sector, companies with 15 or more employees were included in the large company partition. Companies in the respective sectors with employment below these values but with at least 5 employees were included in the small company partition. The purpose of partitioning the sample in this way was to reduce variability in industry estimates largely attributed to random year-to-year selection of small companies by industry and high sampling weights that sometimes were assigned to them. Because of this, in prior reports detailed industry statistics were published from only the large company partition. Statistics from the small company partition were included in the manufacturing, nonmanufacturing, and all industries totals but were aggregated into "small manufacturing" and "small nonmanufacturing" classifications instead of being included in their respective industry classifications. For this chapter, this practice was evaluated and discontinued because it was determined that data for small companies are more useful if they are included in their respective industries even given sampling concerns described above. Consequently, the "small manufacturing" and "small nonmanufacturing" entries are no longer used. For 1999 and 2000, statistics previously published for firms in the small company classifications are not shown separately but are included in the manufacturing, nonmanufacturing, and all industries totals. For more information, see the technical notes in National Science Foundation, Division of Science Resources Statistics, Survey of Industrial Research and Development Methodology: 2001, <http://www.nsf.gov/sbe/srs/sird/start.htm>.

SOURCE: National Science Foundation, Division of Science Resources Statistics, *Research and Development in Industry: 2001* (Arlington, VA, forthcoming).