

Appendix table 4-4

## U.S. inflation-adjusted R&amp;D expenditures, by performing sector and source of funds: 1953–2002

(Millions of constant 1996 dollars)

Year	Performing sector:	Total	Federal	Industry			Industry FFRDCs	U&C <sup>a</sup>					U&C FFRDCs	Other nonprofit institutions			Nonprofit FFRDCs <sup>b</sup>		
	Funding sector:	Total	Federal	Total	Federal <sup>c</sup>	Industry <sup>d</sup>	Federal <sup>e</sup>	Total	Federal	Non-Federal <sup>e</sup>	Industry	U&C	Non-profits	Federal <sup>f</sup>	Total	Federal <sup>c</sup>	Industry	Non-profits	Federal <sup>g</sup>
1953		26,805	5,273	18,857	7,429	11,429	—	1,416	774	205	106	190	140	681	579	299	135	145	—
1954		28,912	4,951	20,936	9,002	11,934	—	1,548	846	229	121	203	149	826	651	332	159	159	—
1955		32,286	4,918	22,836	10,399	12,437	1,153	1,729	966	253	137	212	162	945	662	324	177	162	43
1956		41,746	5,528	30,670	14,645	16,024	1,809	1,912	1,081	276	154	225	176	1,061	711	345	181	186	54
1957		46,693	6,139	34,662	18,590	16,072	1,727	2,049	1,143	303	173	241	189	1,261	788	372	175	241	66
1958		50,659	6,962	37,274	20,499	16,774	1,712	2,269	1,294	333	180	256	206	1,458	901	439	176	287	83
1959		57,217	7,683	42,048	23,844	18,204	2,045	2,678	1,625	368	181	279	226	1,595	1,067	569	192	306	101
1960		61,966	8,115	45,210	25,255	19,955	2,325	3,175	2,039	406	180	302	248	1,735	1,190	667	216	306	216
1961		64,616	8,856	46,136	25,334	20,802	2,186	3,714	2,480	448	178	332	276	1,961	1,355	753	218	383	408
1962		68,734	9,620	48,536	26,420	22,115	1,847	4,365	3,019	493	178	369	306	2,199	1,596	880	237	479	572
1963		76,276	11,124	53,113	29,809	23,304	1,907	5,122	3,646	543	176	417	339	2,520	1,774	1,017	239	517	717
1964		81,653	12,705	55,908	31,093	24,816	1,791	5,889	4,263	589	174	486	377	2,695	1,787	1,071	236	480	878
1965		85,127	13,272	58,082	30,980	27,103	1,531	6,705	4,907	629	175	572	423	2,647	1,985	1,203	261	521	904
1966		90,367	13,523	62,114	32,612	29,501	1,582	7,433	5,458	654	184	673	464	2,664	2,193	1,343	286	564	859
1967		92,600	13,663	63,332	31,519	31,813	1,654	8,072	5,912	666	204	791	498	2,761	2,225	1,357	294	575	893
1968		93,881	13,297	64,692	30,970	33,722	1,671	8,316	6,030	702	219	838	527	2,745	2,266	1,384	308	574	894
1969		94,238	13,738	64,676	28,949	35,727	1,698	8,264	5,884	754	219	845	562	2,650	2,325	1,404	337	584	888
1970		90,435	14,294	60,544	25,141	35,403	1,659	8,319	5,800	816	225	890	588	2,500	2,328	1,409	327	592	791
1971		88,402	14,445	58,417	23,509	34,908	1,702	8,404	5,765	858	236	949	596	2,407	2,321	1,397	321	603	704
1972		90,316	14,694	59,723	23,473	36,251	1,717	8,664	5,940	886	248	979	611	2,467	2,421	1,482	317	622	629
1973		92,271	14,394	61,619	22,619	39,000	1,775	8,789	5,978	897	266	1,021	626	2,503	2,625	1,685	313	628	565
1974		91,203	14,015	60,729	20,677	40,052	1,877	8,781	5,898	874	284	1,072	653	2,529	2,698	1,744	312	642	573
1975		89,315	13,893	58,606	19,680	38,926	2,020	8,917	5,996	869	295	1,078	679	2,666	2,652	1,686	310	655	562
1976		93,312	13,925	61,719	20,499	41,220	2,189	9,216	6,191	872	310	1,135	708	2,992	2,692	1,681	320	691	579
1977		96,330	13,797	64,112	21,153	42,959	2,203	9,653	6,425	875	343	1,263	747	3,259	2,695	1,644	327	724	611
1978		101,057	14,435	66,809	20,956	45,853	2,286	10,358	6,901	919	376	1,408	754	3,673	2,806	1,721	332	754	689
1979		106,042	14,299	70,932	21,730	49,202	2,282	10,937	7,365	922	411	1,502	738	3,852	2,994	1,885	333	775	746
1980		110,869	13,728	75,785	22,356	53,429	2,286	11,317	7,599	909	462	1,612	735	4,043	2,877	1,753	332	792	833
1981		115,910	13,796	80,848	24,045	56,803	2,260	11,360	7,487	932	503	1,696	742	3,983	2,801	1,663	330	807	862
1982		121,975	14,342	86,288	25,752	60,536	2,278	11,475	7,364	937	548	1,821	805	3,839	2,960	1,774	339	848	792
1983		130,676	15,722	92,455	27,722	64,733	2,357	11,979	7,564	955	627	1,969	863	4,123	3,169	1,905	354	909	871
1984		143,171	16,679	102,269	30,315	71,954	2,478	12,813	8,045	1,009	724	2,119	915	4,540	3,518	2,170	372	977	875
1985		155,641	17,767	111,787	34,378	77,409	2,538	13,988	8,669	1,131	855	2,365	968	4,907	3,755	2,307	392	1,056	899
1986		159,720	17,932	114,104	34,524	79,580	2,545	15,323	9,331	1,287	989	2,680	1,036	5,275	3,826	2,257	417	1,152	714
1987		162,734	17,515	116,216	37,068	79,148	2,612	16,508	10,013	1,372	1,071	2,916	1,136	5,526	3,710	2,023	441	1,247	646
1988		166,935	17,881	118,306	35,184	83,122	2,668	17,728	10,712	1,452	1,163	3,150	1,250	5,711	4,005	2,197	464	1,344	635
1989		170,434	18,291	119,923	31,655	88,268	2,674	18,773	11,186	1,530	1,274	3,425	1,358	5,711	4,406	2,476	486	1,444	657
1990		175,677	18,115	124,152	29,825	94,327	2,672	19,577	11,485	1,617	1,347	3,683	1,444	5,657	4,769	2,711	509	1,549	735
1991		179,446	17,008	127,900	26,874	101,026	2,561	20,302	11,893	1,653	1,385	3,856	1,515	5,711	5,189	2,988	534	1,666	776
1992		179,933	17,261	127,131	24,356	102,774	2,456	21,107	12,549	1,660	1,437	3,885	1,576	5,726	5,436	3,055	567	1,814	814

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	Funding sector:			Total	Federal	Total		Federal <sup>c</sup>	Industry <sup>d</sup>	Federal <sup>e</sup>	Total		Federal	Non-Federal <sup>e</sup>	Industry		U&C	Non-profits	Federal <sup>f</sup>
1993	.....	176,270	17,576	122,738	22,163	100,575	2,152	21,783	13,080	1,655	1,479	3,943	1,627	5,624	5,601	3,023	603	1,975	796
1994	.....	176,245	17,035	122,271	21,103	101,168	2,312	22,492	13,527	1,689	1,516	4,101	1,660	5,514	5,831	3,032	642	2,157	790
1995	.....	187,174	17,231	132,345	21,588	110,756	2,323	23,041	13,845	1,784	1,577	4,188	1,647	5,471	5,940	2,902	684	2,353	823
1996	.....	197,288	16,585	142,371	21,356	121,015	2,255	23,702	14,073	1,860	1,671	4,434	1,665	5,395	6,209	2,906	730	2,574	772
1997	.....	208,064	16,497	152,436	21,381	131,055	2,077	24,391	14,239	1,885	1,773	4,744	1,751	5,358	6,500	2,956	793	2,750	805
1998	.....	219,288	16,824	161,921	21,401	140,519	1,998	25,340	14,677	1,909	1,886	5,008	1,860	5,387	7,001	3,179	853	2,969	817
1999	.....	232,697	17,058	172,683	19,624	153,059	1,910	26,885	15,503	2,002	1,985	5,380	2,016	5,401	7,812	3,594	932	3,287	949
2000	.....	247,663	16,763	184,868	16,075	168,793	1,811	28,659	16,541	2,097	2,039	5,805	2,177	5,371	8,821	4,162	1,032	3,627	1,371
2001	preliminary	250,024	19,237	181,423	15,445	165,978	1,796	30,430	17,668	2,170	2,068	6,232	2,292	5,444	9,750	4,852	1,015	3,883	1,945
2002	preliminary	249,678	21,505	175,769	15,445	160,324	2,020	32,562	19,044	2,234	2,116	6,740	2,427	5,478	10,505	5,350	979	4,176	1,839

FFRDC federally funded research and development center

U&amp;C universities and colleges

<sup>a</sup>Adjustments have been made to university R&D for 1998 and later years to eliminate double counting of funds passed through from one academic institution to another. Data for 1998 and later years are not directly comparable to data for 1997 and earlier years. For FY 1998, \$479 million in passthrough funds were reported. For FY 2002, \$865 million in passthrough funds are estimated.

<sup>b</sup>Beginning in 2001, data for nonprofit FFRDCs are reported by FFRDCs. In prior years, data were collected from the Federal agencies supporting the FFRDCs.

<sup>c</sup>Expenditures of industry FFRDCs for 1953–54 were not separated from total Federal support to the industrial sector. Thus, the figure for Federal support to industry includes support to FFRDCs for those years. The same is true for expenditures of nonprofit FFRDCs, which are included in Federal support for nonprofit institutions in 1953–54.

<sup>d</sup>Industry sources of industry R&D expenditures include all non-Federal sources of industry R&D expenditures.

<sup>e</sup>Because of limitations in the survey information, data on non-Federal Government funding to other performers are not available and are consequently included in other sectors' support for their own R&D performance. For example, non-Federal Government support to nonprofits is included in nonprofit support for their own R&D.

<sup>f</sup>Includes all R&D expenditures of FFRDCs administered by academic institutions.

NOTES: Expenditure levels for academic and Federal Government performers are also in reference to calendar years. These levels are approximations based on FY data. For Federal Government expenditures starting in 1977, the calendar-year approximation is 75 percent of the amount reported in the same FY plus 25 percent of the amount reported in the subsequent FY. Academic expenditures in all years and Federal Government expenditures before 1977 are 50 and 50 percent, respectively, because those FYs (for most academic institutions and the Federal Government before 1977) began on July 1 instead of October 1. Technical notes explaining methodological issues of measurement will be provided in National Science Foundation, *The Methodology Underlying the Measurement of R&D Expenditures: 2002* (Arlington, VA, forthcoming). Data are based on annual reports by performers except for the nonprofit sector. Data are preliminary for 2001 and 2002. For trend comparisons, use only the historical data reported here. This table incorporates the latest revisions to prior-year data. Do not use data published earlier.

SOURCES: National Science Foundation, Division of Science Resources Statistics, *National Patterns of R&D Resources*, annual series.