

Appendix table 4-5

U.S. R&D expenditures, by source of funds and performing sector: 1953–2002

(Millions of current dollars)

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Year	Funding sector:	Total	Federal Government							Industry			U&C	Nonprofit		Non-Federal ^a			
	Performing sector:		Total	Federal	Industry ^b	Industry FFRDCs ^b	U&C ^c	U&C FFRDCs ^d	Non-profit ^e	Nonprofit FFRDCs ^{b,e}	Total	Industry ^f	U&C ^c	Non-profit	Total	U&C ^c	U&C ^c		
1953		5,160	2,783	1,015	1,430	—	149	131	58	—	2,247	2,200	21	26	37	55	28	27	40
1954		5,621	3,102	963	1,750	—	165	161	65	—	2,375	2,320	24	31	40	60	31	29	45
1955		6,386	3,708	973	2,057	228	191	187	64	9	2,522	2,460	27	35	42	64	32	32	50
1956		8,537	5,015	1,130	2,995	370	221	217	71	11	3,346	3,277	32	37	46	74	38	36	57
1957		9,866	6,191	1,297	3,928	365	242	267	79	14	3,470	3,396	37	37	51	91	51	40	64
1958		10,963	7,022	1,507	4,436	371	280	316	95	18	3,707	3,630	39	38	56	107	62	45	72
1959		12,519	8,197	1,681	5,217	448	356	349	125	22	4,065	3,983	40	42	61	117	67	50	81
1960		13,750	8,954	1,801	5,604	516	453	385	148	48	4,516	4,428	40	48	67	123	68	55	90
1961		14,500	9,420	1,987	5,685	491	557	440	169	92	4,757	4,668	40	49	75	148	86	62	101
1962		15,630	10,132	2,188	6,008	420	687	500	200	130	5,124	5,029	41	54	84	179	109	70	112
1963		17,543	11,670	2,558	6,856	439	839	580	234	165	5,456	5,360	41	55	96	197	119	78	125
1964		19,058	12,719	2,965	7,257	418	995	629	250	205	5,888	5,792	41	55	114	200	112	88	138
1965		20,243	13,185	3,156	7,367	364	1,167	630	286	215	6,549	6,445	42	62	136	225	124	101	150
1966		22,104	14,197	3,308	7,977	387	1,335	652	329	210	7,331	7,216	45	70	165	252	138	114	160
1967		23,344	14,561	3,444	7,946	417	1,491	696	342	225	8,146	8,020	52	74	200	271	145	126	168
1968		24,691	14,989	3,497	8,145	440	1,586	722	364	235	9,008	8,869	58	81	221	290	151	139	185
1969		26,000	15,233	3,790	7,987	469	1,624	731	388	245	10,011	9,857	61	93	233	316	161	155	208
1970		26,280	14,993	4,154	7,306	482	1,686	727	410	230	10,449	10,288	66	95	259	343	172	171	237
1971		26,980	15,239	4,409	7,175	520	1,760	735	427	215	10,824	10,654	72	98	290	366	184	182	262
1972		28,739	16,038	4,676	7,469	547	1,890	785	472	200	11,715	11,535	79	101	312	393	198	195	282
1973		31,003	16,639	4,837	7,600	597	2,009	841	566	190	13,299	13,104	90	105	343	422	211	211	302
1974		33,398	17,326	5,132	7,572	688	2,160	926	639	210	14,885	14,667	104	114	393	474	235	239	320
1975		35,753	18,615	5,561	7,878	809	2,400	1,067	675	225	15,824	15,582	118	124	432	534	262	272	348
1976		39,471	20,328	5,890	8,671	926	2,619	1,266	711	245	17,702	17,436	131	135	480	592	292	300	369
1977		43,368	22,101	6,211	9,523	992	2,893	1,467	740	275	19,642	19,340	155	147	569	662	326	337	394
1978		48,740	24,434	6,962	10,107	1,103	3,329	1,772	830	333	22,457	22,115	182	160	679	727	363	364	443
1979		55,407	27,253	7,471	11,354	1,192	3,848	2,013	985	390	26,097	25,708	215	174	785	791	405	386	482
1980		63,240	30,002	7,831	12,752	1,304	4,335	2,306	1,000	475	30,929	30,476	264	189	920	871	452	419	519
1981		72,293	33,740	8,605	14,997	1,410	4,670	2,484	1,038	538	35,948	35,428	314	206	1,058	967	504	463	581
1982		80,808	37,194	9,501	17,061	1,509	4,879	2,544	1,175	525	40,692	40,105	363	224	1,207	1,095	561	534	621
1983		90,010	41,511	10,830	19,095	1,624	5,210	2,840	1,313	600	45,264	44,588	432	244	1,357	1,220	626	595	658
1984		102,282	46,508	11,916	21,657	1,770	5,748	3,243	1,550	625	52,187	51,404	518	265	1,514	1,351	698	654	721
1985		114,692	52,662	13,093	25,333	1,870	6,388	3,616	1,700	663	57,962	57,043	630	289	1,743	1,491	778	713	834
1986		120,285	54,659	13,504	26,000	1,917	7,028	3,973	1,700	538	60,991	59,932	745	314	2,019	1,647	867	780	969
1987		126,249	58,498	13,588	28,757	2,027	7,768	4,287	1,569	501	62,576	61,403	831	342	2,262	1,849	967	882	1,065
1988		133,898	60,148	14,342	28,221	2,140	8,592	4,581	1,762	510	67,977	66,672	933	372	2,527	2,081	1,078	1,003	1,165
1989		141,921	60,495	15,231	26,359	2,227	9,315	4,756	2,062	547	74,966	73,501	1,061	405	2,852	2,333	1,202	1,131	1,274
1990		151,978	61,596	15,671	25,802	2,312	9,936	4,894	2,346	636	83,208	81,602	1,166	440	3,187	2,589	1,340	1,249	1,399
1991		160,891	60,799	15,249	24,095	2,296	10,664	5,120	2,679	696	92,300	90,580	1,242	479	3,457	2,852	1,494	1,358	1,483
1992		165,250	60,815	15,853	22,369	2,256	11,525	5,259	2,806	748	96,229	94,388	1,320	521	3,568	3,113	1,666	1,448	1,525

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	Performing sector:		Total	Total	Federal	Industry ^b	Industry FFRDCs ^b	U&C ^c	U&C FFRDCs ^d	Non-profit ^e	Nonprofit FFRDCs ^{b,e}	Total	Industry ^f	U&C ^c	Non-profit	U&C ^c	U&C ^c		
1993	165,782	60,581	16,531	20,844	2,024	12,302	5,289	2,843	749	96,549	94,591	1,391	567	3,708	3,387	1,857	1,530	1,557
1994	169,212	60,787	16,355	20,261	2,220	12,987	5,294	2,911	758	99,203	97,131	1,456	617	3,937	3,664	2,071	1,594	1,622
1995	183,617	62,965	16,904	21,178	2,279	13,582	5,367	2,847	808	110,870	108,652	1,547	671	4,109	3,924	2,308	1,616	1,750
1996	197,288	63,341	16,585	21,356	2,255	14,073	5,395	2,906	772	123,416	121,015	1,671	730	4,434	4,238	2,574	1,665	1,860
1997	212,121	64,548	16,819	21,798	2,117	14,517	5,463	3,014	821	136,227	133,611	1,807	809	4,836	4,589	2,804	1,785	1,921
1998	226,305	66,340	17,362	22,086	2,062	15,147	5,559	3,281	843	147,843	145,016	1,947	880	5,168	4,984	3,064	1,919	1,970
1999	243,517	67,015	17,851	20,536	1,999	16,223	5,652	3,761	993	163,229	160,176	2,077	975	5,630	5,549	3,440	2,110	2,095
2000	264,725	66,371	17,917	17,183	1,935	17,681	5,741	4,449	1,465	183,703	180,421	2,180	1,103	6,205	6,204	3,877	2,327	2,242
2001 preliminary	273,565	72,637	21,048	16,899	1,965	19,332	5,957	5,309	2,129	184,978	181,606	2,263	1,110	6,819	6,756	4,248	2,507	2,375
2002 preliminary	276,185	78,185	23,788	17,085	2,235	21,066	6,060	5,918	2,034	180,769	177,345	2,341	1,083	7,455	7,304	4,619	2,685	2,472

FFRDC federally funded research and development center

U&C universities and colleges

^aBecause 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.

^bExpenditures 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 1953–63.

^cAdjustments 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.

^dIncludes all R&D expenditures of FFRDCs administered by academic institutions.

^eBeginning in 2001, data for nonprofit FFRDCs are reported by FFRDCs. In prior years, data were collected from the Federal agencies supporting the FFRDCs.

^fIndustry sources of industry R&D expenditures include all non-Federal sources of industry R&D expenditures.

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: Data were derived from National Science Foundation, Division of Science Resources Statistics, *National Patterns of R&D Resources*, annual series.