

Appendix table 4-17

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

(Millions of current dollars)

Year	Funding sector:	Total	Federal Government							Industry				U&C	Nonprofits			Non-Federal ^a	
	Performing sector:		Total	Federal	Industry ^b	Industry FFRDCs ^b	U&C ^c	U&C FFRDCs ^d	Non-profits ^b	Nonprofit FFRDCs ^b	Total	Industry ^e	U&C ^c	Non-profits	U&C ^c	Total	Non-profits	U&C ^c	U&C ^c
1953		3,412	1,762	567	1,123	—	9	48	17	—	1,637	1,630	1	6	3	7	6	1	3
1954		3,734	2,027	537	1,405	—	9	59	18	—	1,693	1,685	1	7	3	8	7	1	3
1955		4,189	2,427	543	1,785	—	12	69	19	—	1,748	1,738	2	8	3	8	7	1	4
1956		5,855	3,561	631	2,817	—	14	81	20	—	2,277	2,267	2	8	4	9	7	2	4
1957		6,681	4,477	728	3,616	—	12	101	21	—	2,185	2,174	3	8	4	10	8	2	5
1958		7,214	4,941	842	3,942	—	13	120	25	—	2,252	2,241	3	8	4	11	9	2	6
1959		8,463	5,872	940	4,750	—	16	134	32	—	2,569	2,557	3	9	5	12	10	2	6
1960		9,360	6,390	1,003	5,169	—	19	151	49	—	2,948	2,935	3	10	5	12	10	2	6
1961		9,930	6,701	1,090	5,347	—	22	170	73	—	3,201	3,189	2	10	5	16	14	2	7
1962		10,116	6,823	1,227	5,281	—	23	190	103	—	3,259	3,246	2	11	6	20	18	2	8
1963		11,540	7,956	1,465	6,116	—	22	219	134	—	3,548	3,535	2	11	6	22	20	2	8
1964		12,476	8,580	1,680	6,156	329	30	227	159	—	3,861	3,848	2	11	7	21	18	3	8
1965		13,202	8,728	1,789	6,218	285	48	207	183	—	4,433	4,419	2	12	8	24	20	4	9
1966		14,505	9,481	1,886	6,849	287	61	200	199	—	4,977	4,961	2	14	10	28	23	5	9
1967		15,327	9,517	1,943	6,795	298	66	208	208	—	5,762	5,744	3	15	10	31	24	7	9
1968		16,173	9,775	1,904	7,044	313	72	226	217	—	6,346	6,326	4	16	9	35	26	9	8
1969		17,055	9,852	2,016	6,944	336	80	246	231	—	7,150	7,127	5	18	8	38	28	10	7
1970		16,950	9,408	2,258	6,232	366	84	249	220	—	7,489	7,466	5	18	7	40	30	10	6
1971		17,404	9,566	2,473	6,167	397	69	267	194	—	7,780	7,757	4	19	9	42	33	9	8
1972		18,742	10,139	2,639	6,533	401	63	291	213	—	8,533	8,510	4	19	14	44	35	9	12
1973		20,237	10,351	2,657	6,621	439	71	296	268	—	9,798	9,773	5	20	20	51	38	13	18
1974		21,532	10,534	2,765	6,553	507	75	321	314	—	10,896	10,868	7	22	25	57	42	15	20
1975		22,765	11,052	2,890	6,783	595	83	373	330	—	11,600	11,569	8	23	27	63	47	16	22
1976		25,096	12,046	2,972	7,522	665	100	447	341	—	12,927	12,890	12	25	31	68	52	16	24
1977		27,687	13,173	3,188	8,275	695	153	503	359	—	14,370	14,328	15	27	40	76	58	19	28
1978		31,070	14,397	3,676	8,756	767	254	542	403	—	16,504	16,460	15	30	49	88	64	24	32
1979		35,463	16,082	3,944	9,888	828	336	603	483	—	19,193	19,145	16	32	56	99	71	28	34
1980		40,695	17,534	4,072	10,957	899	362	719	525	—	22,945	22,891	19	35	68	110	79	31	38
1981		46,057	19,994	4,530	12,791	960	386	778	549	—	25,817	25,756	24	37	80	123	88	35	44
1982		51,696	22,139	5,178	14,215	1,005	397	745	599	—	29,286	29,219	27	40	88	137	98	39	46
1983		57,540	24,628	6,106	15,522	1,055	399	832	715	—	32,617	32,542	31	44	97	151	109	43	47
1984		66,273	28,131	7,078	17,640	1,068	435	986	925	—	37,815	37,731	37	47	108	167	120	47	51
1985		74,428	32,211	8,011	20,258	1,113	486	1,244	1,100	—	41,857	41,762	43	51	120	183	134	49	57
1986		75,775	33,913	8,275	21,517	1,166	513	1,504	938	—	41,460	41,354	50	55	136	201	149	53	65
1987		79,850	36,613	8,176	24,122	1,276	599	1,670	771	—	42,784	42,667	57	60	155	226	165	61	73
1988		84,569	37,287	8,864	23,719	1,416	698	1,762	407	420	46,765	46,634	66	65	180	255	183	71	83
1989		87,727	35,323	9,355	21,049	1,427	773	1,782	507	430	51,822	51,676	76	70	205	285	203	81	92
1990		94,053	33,844	9,700	18,966	1,424	909	1,735	619	490	59,568	59,410	83	75	226	315	226	89	99
1991		95,101	31,217	8,778	17,256	1,380	1,011	1,537	722	533	63,197	63,030	86	82	239	345	251	94	103
1992		99,726	31,430	9,098	17,181	1,289	1,054	1,452	758	599	67,567	67,388	91	88	246	378	279	100	105

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

(Millions of current dollars)

Year	Funding sector:	Total	Federal Government							Industry				U&C	Nonprofits			Non-Federal ^a	
	Performing sector:		Total	Total	Federal	Industry ^b	Industry FFRDCs ^b	U&C ^c	U&C FFRDCs ^d	Non-profits ^b	Nonprofit FFRDCs ^b	Total	Industry ^e	U&C ^c	Non-profits	U&C ^c	Total	Non-profits	U&C ^c
1993		99,744	30,093	9,071	16,083	1,078	1,126	1,374	787	574	68,866	68,674	97	95	259	416	309	107	109
1994		102,939	30,209	8,823	16,209	1,199	1,212	1,378	815	573	71,886	71,681	102	103	276	455	343	112	114
1995		113,115	32,472	9,262	17,824	1,246	1,178	1,616	744	603	79,738	79,518	108	111	288	495	381	113	123
1996		121,359	31,355	9,033	17,066	1,342	1,127	1,520	698	571	89,032	88,797	115	120	305	538	423	115	128
1997		128,671	32,267	9,077	18,121	1,289	1,055	1,454	687	585	95,331	95,063	113	155	304	648	536	112	121
1998		144,689	32,703	9,214	18,452	1,257	985	1,527	760	507	110,871	110,589	114	168	302	698	586	112	115
1999		152,943	29,912	8,974	16,219	1,180	711	1,636	726	467	121,810	121,505	119	187	322	779	658	121	120
2000		165,847	25,886	8,047	13,552	1,143	451	1,539	513	640	138,608	138,274	124	211	352	874	742	132	127
2001 preliminary		163,233	26,842	9,567	12,542	1,160	499	1,571	581	922	134,908	134,566	130	212	391	956	813	144	136
2002 preliminary		161,816	28,459	11,088	12,680	1,320	477	1,452	608	835	131,750	131,409	134	207	427	1,038	884	154	142

FFRDC federally funded research and development center

U&C universities and colleges

^aBecause of limitations in 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 nonprofits' support for their own R&D.

^bExpenditures of industry FFRDCs for 1953–63 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 1953–87.

^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. The character-of-work estimation procedure for university and college R&D also was revised for 1998 and later years; hence, these data are not directly comparable with data for 1997 and earlier years.

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

^eIndustry 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 prior to 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. Because of changes in estimation procedures, character-of-work data before 1998 for industry and for U&C are not comparable with later years. Technical notes explaining methodological issues of measurement will be provided in NSF, *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. 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.

Science & Engineering Indicators – 2004