

Appendix table 4-12

U.S. inflation-adjusted applied research expenditures, by performing sector and source of funds: 1953–2002

(Millions of constant 1996 dollars)

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Year	Performing sector:	Total	Federal	Industry			Industry FFRDCs	U&C ^a					U&C FFRDCs	Other nonprofit institutions			Nonprofit FFRDCs		
	Funding sector:	Total	Federal	Total	Federal ^b	Industry ^c	Federal ^b	Total	Federal	Non-Federal ^d	Industry	U&C	Non-profits	Federal ^e	Total	Federal ^b	Industry	Non-profits	Federal ^b
1953		6,696	1,803	3,771	1,496	2,275	—	694	306	157	34	145	52	247	182	73	57	52	—
1954		7,088	1,695	4,187	1,656	2,531	—	702	306	162	39	144	51	298	206	82	67	57	—
1955		7,652	1,684	4,692	1,860	2,831	—	715	319	163	43	137	53	344	217	91	71	56	—
1956		9,425	1,890	6,200	2,318	3,883	—	714	318	162	49	132	54	384	237	100	68	68	—
1957		11,422	2,108	7,903	3,209	4,695	—	693	298	161	54	128	52	445	272	111	66	95	—
1958		12,745	2,384	8,831	3,577	5,254	—	700	303	163	55	126	53	511	319	139	65	116	—
1959		13,435	2,635	9,100	3,716	5,384	—	763	354	169	57	128	55	551	386	194	69	123	—
1960		13,813	2,769	9,144	3,754	5,390	—	836	419	174	59	130	54	579	484	282	77	126	—
1961		13,917	2,977	8,810	3,619	5,192	—	885	461	178	58	132	56	646	599	368	76	156	—
1962		16,260	3,116	10,770	4,446	6,324	—	950	521	178	59	134	57	715	710	429	84	198	—
1963		16,802	3,517	10,683	4,378	6,304	—	998	554	183	61	141	59	809	796	500	83	213	—
1964		17,965	4,055	10,874	4,190	6,684	231	1,095	608	194	58	160	75	870	840	557	81	201	—
1965		18,406	4,178	10,984	4,172	6,812	208	1,276	738	195	55	177	111	864	896	589	88	219	—
1966		19,082	4,137	11,406	4,031	7,375	278	1,435	850	192	57	198	137	871	955	623	98	233	—
1967		19,238	4,238	11,234	3,899	7,334	337	1,541	942	181	61	214	143	893	996	658	99	238	—
1968		19,548	4,226	11,548	3,635	7,913	346	1,540	949	175	61	209	146	838	1,049	707	106	236	—
1969		19,773	4,455	11,569	3,335	8,235	348	1,511	930	174	58	195	154	772	1,116	761	116	239	—
1970		19,744	4,590	11,459	3,276	8,183	282	1,550	962	176	60	192	160	733	1,129	774	114	241	—
1971		19,178	4,440	10,970	2,972	7,998	285	1,635	1,003	198	61	219	154	706	1,142	788	111	242	—
1972		19,323	4,506	10,707	2,656	8,052	341	1,944	1,227	233	64	257	162	704	1,120	762	110	248	—
1973		19,822	4,546	11,057	2,628	8,429	342	2,156	1,338	261	77	297	183	603	1,119	765	107	247	—
1974		20,081	4,512	11,382	2,471	8,910	354	2,167	1,301	262	86	322	195	520	1,146	792	106	249	—
1975		20,248	4,776	11,069	2,476	8,594	382	2,333	1,373	283	96	351	230	547	1,140	787	104	249	—
1976		21,274	4,890	11,690	2,442	9,248	448	2,463	1,408	301	105	391	258	621	1,162	798	106	259	—
1977		21,475	4,621	12,048	2,472	9,576	484	2,500	1,389	299	113	431	268	660	1,162	789	107	267	—
1978		22,202	4,648	12,575	2,478	10,097	495	2,585	1,401	314	125	481	264	672	1,227	848	107	273	—
1979		23,164	4,622	13,349	2,498	10,852	490	2,713	1,517	309	137	504	247	689	1,301	919	106	276	—
1980		24,108	4,463	14,332	2,849	11,483	492	2,844	1,599	304	155	540	246	738	1,238	857	104	277	—
1981		26,308	4,379	16,676	3,274	13,402	505	2,855	1,527	319	173	581	255	677	1,215	836	102	277	—
1982		27,610	4,229	18,047	3,914	14,133	572	2,890	1,519	313	183	607	268	653	1,219	830	104	285	—
1983		29,625	4,343	19,618	4,685	14,933	649	3,072	1,629	312	205	643	282	687	1,257	849	107	300	—
1984		31,531	4,145	21,302	5,147	16,155	795	3,264	1,716	328	235	688	297	768	1,258	831	111	317	—
1985		34,482	4,254	23,918	6,401	17,517	855	3,430	1,759	355	268	743	304	786	1,240	789	115	336	—
1986		36,193	4,254	25,403	5,376	20,027	833	3,691	1,849	396	304	824	318	735	1,276	797	121	359	—
1987		35,901	4,338	24,736	5,204	19,532	722	4,149	2,118	429	335	912	356	685	1,271	764	126	381	—
1988		36,814	4,191	25,405	4,795	20,610	463	4,712	2,440	470	377	1,020	405	682	1,279	746	131	402	82
1989		38,765	4,283	26,801	5,193	21,608	453	5,029	2,546	501	417	1,121	445	724	1,392	834	135	423	84
1990		40,351	4,222	28,204	6,897	21,306	460	5,092	2,473	523	436	1,192	467	796	1,484	901	139	444	94
1991		43,105	4,566	30,128	6,232	23,896	504	5,140	2,487	522	437	1,216	478	1,033	1,638	1,027	144	467	96
1992		41,284	4,722	27,940	4,874	23,066	532	5,314	2,627	521	451	1,219	495	1,024	1,664	1,016	150	497	89

U.S. inflation-adjusted applied research 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 ^a					U&C FFRDCs	Other nonprofit institutions			Nonprofit FFRDCs		
	Funding sector:			Total	Federal ^b	Industry ^c		Federal ^b	Total	Federal	Non-Federal ^d	Industry		U&C	Non-profits	Federal ^e		Total	Federal ^b
1993		39,656	5,144	25,785	4,567	21,219	481	5,472	2,700	527	471	1,256	518	1,023	1,642	957	157	528	109
1994		38,145	5,192	23,943	3,766	20,177	532	5,611	2,750	539	484	1,308	530	1,022	1,728	999	165	563	116
1995		41,647	5,048	27,440	3,225	24,215	468	5,764	2,829	569	503	1,337	526	1,070	1,725	952	173	600	131
1996		43,160	4,872	29,010	3,640	25,370	227	5,879	2,859	584	524	1,390	522	1,270	1,781	960	182	640	122
1997		45,656	4,901	31,810	2,597	29,212	213	5,405	2,500	540	507	1,357	501	1,312	1,890	992	201	697	126
1998		44,926	4,986	31,209	2,550	28,659	234	5,053	2,215	508	502	1,333	495	1,329	1,996	1,027	216	752	119
1999		49,559	5,284	34,800	2,971	31,829	260	5,584	2,618	522	517	1,402	525	1,196	2,312	1,243	236	833	124
2000		52,868	5,712	36,316	2,515	33,801	246	6,257	3,127	542	527	1,499	562	1,243	2,899	1,718	261	919	195
2001 preliminary		58,135	6,548	39,744	3,293	36,451	244	6,718	3,387	566	540	1,627	598	1,347	3,260	2,019	257	984	276
2002 preliminary		58,583	7,307	38,502	3,293	35,209	275	7,239	3,711	583	552	1,759	633	1,487	3,527	2,220	248	1,058	245

FFRDC federally funded research and development center

U&C universities and colleges

^aAdjustments 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.

^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.

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

^dBecause 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.

^eIncludes 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 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 data for 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.