

Appendix table 4-14

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

(Millions of constant 1996 dollars)

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Year	Funding sector:	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	U&C ^c
1953		6,696	3,925	1,803	1,496	—	306	247	73	—	2,366	2,275	34	57	145	104	52	52	157
1954		7,088	4,038	1,695	1,656	—	306	298	82	—	2,636	2,531	39	67	144	108	57	51	162
1955		7,652	4,297	1,684	1,860	—	319	344	91	—	2,945	2,831	43	71	137	109	56	53	163
1956		9,425	5,010	1,890	2,318	—	318	384	100	—	4,000	3,883	49	68	132	122	68	54	162
1957		11,422	6,171	2,108	3,209	—	298	445	111	—	4,815	4,695	54	66	128	147	95	52	161
1958		12,745	6,913	2,384	3,577	—	303	511	139	—	5,374	5,254	55	65	126	169	116	53	163
1959		13,435	7,450	2,635	3,716	—	354	551	194	—	5,510	5,384	57	69	128	178	123	55	169
1960		13,813	7,803	2,769	3,754	—	419	579	282	—	5,525	5,390	59	77	130	180	126	54	174
1961		13,917	8,070	2,977	3,619	—	461	646	368	—	5,325	5,192	58	76	132	212	156	56	178
1962		16,260	9,226	3,116	4,446	—	521	715	429	—	6,467	6,324	59	84	134	255	198	57	178
1963		16,802	9,759	3,517	4,378	—	554	809	500	—	6,448	6,304	61	83	141	272	213	59	183
1964		17,965	10,512	4,055	4,190	231	608	870	557	—	6,823	6,684	58	81	160	276	201	75	194
1965		18,406	10,749	4,178	4,172	208	738	864	589	—	6,955	6,812	55	88	177	330	219	111	195
1966		19,082	10,791	4,137	4,031	278	850	871	623	—	7,531	7,375	57	98	198	370	233	137	192
1967		19,238	10,968	4,238	3,899	337	942	893	658	—	7,495	7,334	61	99	214	381	238	143	181
1968		19,548	10,702	4,226	3,635	346	949	838	707	—	8,080	7,913	61	106	209	382	236	146	175
1969		19,773	10,601	4,455	3,335	348	930	772	761	—	8,409	8,235	58	116	195	393	239	154	174
1970		19,744	10,618	4,590	3,276	282	962	733	774	—	8,357	8,183	60	114	192	401	241	160	176
1971		19,178	10,193	4,440	2,972	285	1,003	706	788	—	8,170	7,998	61	111	219	396	242	154	198
1972		19,323	10,196	4,506	2,656	341	1,227	704	762	—	8,226	8,052	64	110	257	410	248	162	233
1973		19,822	10,221	4,546	2,628	342	1,338	603	765	—	8,613	8,429	77	107	297	430	247	183	261
1974		20,081	9,950	4,512	2,471	354	1,301	520	792	—	9,102	8,910	86	106	322	444	249	195	262
1975		20,248	10,340	4,776	2,476	382	1,373	547	787	—	8,794	8,594	96	104	351	479	249	230	283
1976		21,274	10,606	4,890	2,442	448	1,408	621	798	—	9,459	9,248	105	106	391	517	259	258	301
1977		21,475	10,416	4,621	2,472	484	1,389	660	789	—	9,796	9,576	113	107	431	534	267	268	299
1978		22,202	10,541	4,648	2,478	495	1,401	672	848	—	10,330	10,097	125	107	481	537	273	264	314
1979		23,164	10,734	4,622	2,498	490	1,517	689	919	—	11,094	10,852	137	106	504	523	276	247	309
1980		24,108	10,998	4,463	2,849	492	1,599	738	857	—	11,742	11,483	155	104	540	523	277	246	304
1981		26,308	11,199	4,379	3,274	505	1,527	677	836	—	13,677	13,402	173	102	581	532	277	255	319
1982		27,610	11,717	4,229	3,914	572	1,519	653	830	—	14,419	14,133	183	104	607	554	285	268	313
1983		29,625	12,843	4,343	4,685	649	1,629	687	849	—	15,245	14,933	205	107	643	582	300	282	312
1984		31,531	13,402	4,145	5,147	795	1,716	768	831	—	16,500	16,155	235	111	688	614	317	297	328
1985		34,482	14,844	4,254	6,401	855	1,759	786	789	—	17,900	17,517	268	115	743	640	336	304	355
1986		36,193	13,845	4,254	5,376	833	1,849	735	797	—	20,451	20,027	304	121	824	677	359	318	396
1987		35,901	13,831	4,338	5,204	722	2,118	685	764	—	19,993	19,532	335	126	912	736	381	356	429
1988		36,814	13,401	4,191	4,795	463	2,440	682	746	82	21,117	20,610	377	131	1,020	807	402	405	470
1989		38,765	14,117	4,283	5,193	453	2,546	724	834	84	22,160	21,608	417	135	1,121	867	423	445	501
1990		40,351	15,843	4,222	6,897	460	2,473	796	901	94	21,881	21,306	436	139	1,192	911	444	467	523
1991		43,105	15,945	4,566	6,232	504	2,487	1,033	1,027	96	24,476	23,896	437	144	1,216	945	467	478	522
1992		41,284	14,885	4,722	4,874	532	2,627	1,024	1,016	89	23,668	23,066	451	150	1,219	991	497	495	521

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

(Millions of constant 1996 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		39,656	14,980	5,144	4,567	481	2,700	1,023	957	109	21,847	21,219	471	157	1,256	1,047	528	518	527
1994		38,145	14,378	5,192	3,766	532	2,750	1,022	999	116	20,826	20,177	484	165	1,308	1,093	563	530	539
1995		41,647	13,724	5,048	3,225	468	2,829	1,070	952	131	24,891	24,215	503	173	1,337	1,126	600	526	569
1996		43,160	13,949	4,872	3,640	227	2,859	1,270	960	122	26,076	25,370	524	182	1,390	1,162	640	522	584
1997		45,656	12,641	4,901	2,597	213	2,500	1,312	992	126	29,920	29,212	507	201	1,357	1,197	697	501	540
1998		44,926	12,461	4,986	2,550	234	2,215	1,329	1,027	119	29,377	28,659	502	216	1,333	1,247	752	495	508
1999		49,559	13,695	5,284	2,971	260	2,618	1,196	1,243	124	32,583	31,829	517	236	1,402	1,358	833	525	522
2000		52,868	14,756	5,712	2,515	246	3,127	1,243	1,718	195	34,589	33,801	527	261	1,499	1,482	919	562	542
2001 preliminary		58,135	17,113	6,548	3,293	244	3,387	1,347	2,019	276	37,248	36,451	540	257	1,627	1,582	984	598	566
2002 preliminary		58,583	18,539	7,307	3,293	275	3,711	1,487	2,220	245	36,010	35,209	552	248	1,759	1,692	1,058	633	583

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 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.