

Appendix table 4-8

U.S. inflation-adjusted basic 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		2,387	527	784	99	686	—	639	423	34	68	31	83	187	249	140	47	62	—
1954		2,616	494	854	118	736	—	759	496	49	77	43	93	226	283	159	57	67	—
1955		2,927	493	956	137	819	—	907	589	70	86	59	104	253	319	182	66	71	—
1956		3,511	555	1,237	181	1,056	—	1,076	697	93	95	76	115	284	359	203	73	83	—
1957		3,850	587	1,283	194	1,088	—	1,233	788	117	106	93	128	338	409	230	71	109	—
1958		4,360	689	1,363	199	1,165	—	1,442	933	144	111	111	143	393	474	270	74	129	—
1959		4,968	752	1,463	329	1,133	—	1,773	1,200	172	110	130	162	432	548	329	82	137	—
1960		5,795	827	1,694	356	1,338	—	2,183	1,534	203	110	151	185	478	613	383	95	135	—
1961		6,736	1,023	1,760	361	1,399	—	2,663	1,923	239	111	177	212	559	731	468	98	165	—
1962		8,021	1,108	2,146	629	1,517	—	3,239	2,399	280	110	210	240	649	880	572	106	202	—
1963		9,196	1,237	2,270	639	1,630	—	3,950	2,996	326	107	250	272	761	978	652	109	217	—
1964		10,238	1,452	2,172	527	1,645	152	4,587	3,528	361	107	298	291	855	1,020	711	107	201	—
1965		11,207	1,575	2,368	660	1,707	126	5,132	3,968	397	111	362	294	915	1,091	751	122	219	—
1966		11,985	1,676	2,424	581	1,844	133	5,642	4,358	423	119	435	307	975	1,135	767	131	237	—
1967		12,566	1,720	2,360	666	1,694	137	6,162	4,710	452	133	538	329	1,043	1,144	768	135	242	—
1968		12,840	1,833	2,308	551	1,757	137	6,390	4,810	497	143	594	346	1,048	1,125	745	141	240	—
1969		12,650	1,976	2,106	446	1,660	132	6,356	4,667	554	143	620	372	986	1,095	696	156	243	—
1970		12,362	1,934	1,948	420	1,528	119	6,383	4,551	617	148	673	394	910	1,068	669	151	248	—
1971		12,199	1,904	1,825	331	1,494	118	6,448	4,536	635	162	701	414	826	1,078	678	147	252	—
1972		12,095	1,894	1,741	286	1,455	118	6,403	4,516	614	173	679	421	849	1,091	679	148	264	—
1973		12,220	1,940	1,771	286	1,485	126	6,259	4,430	584	174	664	406	1,021	1,103	689	146	268	—
1974		12,323	1,952	1,775	311	1,464	139	6,230	4,394	557	180	683	416	1,132	1,095	669	147	278	—
1975		12,197	1,898	1,691	260	1,431	152	6,194	4,417	531	179	658	410	1,188	1,074	637	148	289	—
1976		12,709	2,010	1,773	274	1,499	170	6,323	4,548	515	177	670	413	1,314	1,120	656	154	309	—
1977		13,356	2,094	1,857	300	1,557	177	6,589	4,696	515	198	742	439	1,481	1,158	669	159	329	—
1978		14,434	2,165	1,951	323	1,628	200	7,000	4,974	539	221	826	441	1,878	1,239	728	164	348	—
1979		15,006	2,129	2,017	308	1,709	207	7,325	5,204	547	244	892	438	2,009	1,319	789	166	363	—
1980		15,418	2,125	2,113	298	1,815	218	7,565	5,366	538	273	954	435	2,045	1,352	809	167	376	—
1981		15,757	2,153	2,368	263	2,105	216	7,594	5,341	542	293	987	432	2,059	1,367	810	168	389	—
1982		16,334	2,297	2,681	382	2,299	189	7,685	5,245	556	325	1,081	478	2,062	1,421	832	174	415	—
1983		17,514	2,515	3,057	502	2,555	177	8,011	5,355	575	377	1,185	519	2,229	1,524	889	184	451	—
1984		18,873	2,627	3,460	476	2,984	189	8,601	5,720	610	438	1,281	553	2,392	1,605	919	195	492	—
1985		20,157	2,643	3,706	486	3,220	173	9,532	6,250	698	528	1,459	597	2,433	1,671	924	207	539	—
1986		22,910	2,690	5,218	576	4,642	164	10,546	6,801	804	618	1,676	647	2,543	1,748	929	223	596	—
1987		23,907	2,639	5,389	771	4,618	246	11,141	7,124	849	663	1,804	703	2,689	1,803	912	238	653	—
1988		24,687	2,638	5,190	818	4,372	439	11,648	7,401	879	704	1,907	757	2,832	1,909	943	253	714	30
1989		26,317	2,773	5,786	1,184	4,602	508	12,270	7,712	919	765	2,058	816	2,847	2,077	1,033	267	777	56
1990		26,607	2,680	5,351	1,005	4,346	566	12,859	7,962	979	815	2,230	874	2,855	2,222	1,095	283	844	75
1991		30,273	2,652	8,227	1,395	6,831	518	13,452	8,278	1,017	852	2,372	932	2,963	2,375	1,155	300	920	86
1992		30,061	2,634	7,108	775	6,333	521	14,057	8,774	1,025	887	2,398	973	3,121	2,548	1,213	321	1,014	73

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(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	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
1993		30,560	2,787	6,834	495	6,338	526	14,506	9,183	1,012	905	2,411	995	3,140	2,692	1,230	344	1,117	77
1994		30,883	2,653	6,785	454	6,331	531	14,991	9,515	1,032	926	2,505	1,014	3,056	2,790	1,184	370	1,235	78
1995		30,221	2,741	5,677	194	5,483	586	15,432	9,815	1,089	963	2,558	1,006	2,754	2,955	1,193	398	1,364	77
1996		32,770	2,680	7,498	650	6,848	687	16,033	10,087	1,148	1,032	2,738	1,028	2,606	3,187	1,248	428	1,510	79
1997		36,198	2,693	9,608	1,009	8,598	599	17,313	10,704	1,226	1,155	3,088	1,140	2,620	3,259	1,291	440	1,527	106
1998		34,158	2,910	5,672	971	4,701	546	18,710	11,507	1,289	1,274	3,383	1,256	2,578	3,538	1,415	474	1,649	206
1999		36,990	3,198	6,279	1,155	5,124	522	19,971	12,206	1,366	1,354	3,670	1,376	2,642	3,999	1,657	517	1,825	379
2000		39,637	3,522	6,511	882	5,629	495	21,293	12,992	1,437	1,397	3,976	1,491	2,688	4,551	1,964	573	2,014	576
2001 preliminary		42,702	3,945	7,230	689	6,541	491	22,525	13,825	1,480	1,410	4,249	1,562	2,662	5,022	2,303	563	2,156	827
2002 preliminary		44,810	4,174	7,007	689	6,318	552	24,117	14,902	1,523	1,443	4,595	1,655	2,678	5,442	2,580	544	2,319	839

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.