

Appendix table 4-16

U.S. inflation-adjusted development 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 ^b	Industry ^c		Federal ^b	Total	Federal	Non-Federal ^d	Industry		U&C	Non-profits	Federal ^e		Total	Federal ^b
1953		17,722	2,943	14,301	5,834	8,468	—	83	44	15	5	14	5	247	148	86	31	31	—
1954		19,208	2,762	15,895	7,227	8,668	—	87	44	18	5	16	5	301	162	90	36	36	—
1955		21,178	2,743	17,811	9,024	8,787	—	106	58	19	8	16	5	349	169	94	40	35	—
1956		28,628	3,083	24,861	13,775	11,086	—	122	66	22	10	18	7	394	169	95	39	34	—
1957		31,619	3,443	27,402	17,113	10,289	—	123	57	25	12	20	9	478	173	97	38	38	—
1958		33,334	3,889	28,572	18,216	10,356	—	127	58	26	14	20	9	555	192	113	37	42	—
1959		38,679	4,296	33,396	21,709	11,686	—	142	71	27	14	21	9	612	233	146	41	46	—
1960		42,181	4,518	36,521	23,294	13,227	—	155	86	28	11	21	9	678	309	219	45	45	—
1961		44,249	4,855	38,039	23,828	14,211	—	167	96	31	9	23	9	755	432	325	45	62	—
1962		44,483	5,396	37,498	23,223	14,274	—	176	99	34	9	25	9	836	578	451	48	79	—
1963		50,172	6,370	41,961	26,591	15,370	—	174	96	34	9	26	9	950	717	583	48	87	—
1964		53,451	7,198	42,862	26,375	16,487	1,407	208	126	34	9	28	11	970	805	681	47	77	—
1965		55,515	7,521	44,731	26,148	18,583	1,196	296	202	36	8	33	17	868	902	767	50	84	—
1966		59,301	7,711	48,283	28,001	20,282	1,171	356	249	38	8	39	20	818	963	812	57	94	—
1967		60,797	7,707	49,738	26,954	22,785	1,180	369	260	34	10	40	26	825	978	823	60	95	—
1968		61,494	7,240	50,837	26,783	24,053	1,188	386	272	29	15	35	34	859	985	825	61	99	—
1969		61,815	7,306	51,000	25,169	25,832	1,218	397	288	26	18	29	36	892	1,002	835	65	101	—
1970		58,329	7,770	47,137	21,445	25,692	1,258	385	287	22	17	24	34	857	922	757	62	103	—
1971		57,025	8,101	45,623	20,206	25,416	1,299	321	226	26	13	28	28	875	806	636	62	108	—
1972		58,899	8,294	47,275	20,531	26,744	1,259	317	196	39	11	43	28	915	839	669	60	110	—
1973		60,228	7,908	48,792	19,705	29,086	1,307	374	210	52	15	59	37	879	969	796	60	113	—
1974		58,799	7,552	47,572	17,895	29,678	1,384	384	203	55	18	67	41	877	1,030	856	59	115	—
1975		56,870	7,219	45,846	16,945	28,901	1,485	390	206	55	20	69	40	931	1,000	824	58	117	—
1976		59,328	7,025	48,255	17,783	30,473	1,571	430	235	57	27	74	38	1,057	989	806	60	123	—
1977		61,499	7,081	50,207	18,381	31,826	1,543	564	340	62	32	89	41	1,118	987	797	61	128	—
1978		64,421	7,622	52,283	18,155	34,128	1,591	773	526	66	30	102	49	1,123	1,029	835	61	133	—
1979		67,873	7,548	55,566	18,924	36,641	1,585	899	644	65	30	107	53	1,155	1,121	923	61	137	—
1980		71,344	7,140	59,341	19,209	40,131	1,576	908	634	67	34	119	54	1,260	1,120	920	61	139	—
1981		73,844	7,264	61,804	20,508	41,295	1,539	910	619	70	38	128	56	1,247	1,081	880	60	141	—
1982		78,031	7,816	65,561	21,457	44,104	1,517	901	600	69	40	133	59	1,124	1,112	904	61	147	—
1983		83,537	8,864	69,779	22,535	47,244	1,531	896	580	69	45	141	62	1,207	1,259	1,038	63	158	—
1984		92,767	9,908	77,507	24,692	52,815	1,494	948	609	72	52	151	65	1,380	1,530	1,295	66	169	—
1985		101,002	10,871	84,163	27,491	56,673	1,510	1,026	660	78	59	163	67	1,688	1,744	1,493	69	182	—
1986		100,617	10,988	83,483	28,571	54,912	1,549	1,086	682	87	67	181	70	1,997	1,516	1,245	73	197	—
1987		102,926	10,538	86,090	31,093	54,997	1,645	1,218	772	94	74	200	78	2,152	1,283	994	77	213	—
1988		105,434	11,051	87,711	29,571	58,140	1,766	1,369	870	103	83	224	89	2,197	817	508	80	228	524
1989		105,352	11,235	87,336	25,278	62,058	1,713	1,473	928	110	91	246	98	2,140	937	609	84	244	517
1990		108,719	11,213	90,598	21,923	68,674	1,646	1,626	1,051	115	96	262	103	2,006	1,064	716	87	261	567
1991		106,069	9,790	89,545	19,246	70,299	1,539	1,710	1,128	115	96	267	105	1,714	1,176	805	91	280	594
1992		108,587	9,906	92,083	18,708	73,375	1,403	1,737	1,148	114	99	268	109	1,581	1,225	825	96	303	653

U.S. inflation-adjusted development 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	Total	Federal ^b	Industry ^c	Federal ^b	Total	Federal	Non-Federal ^d	Industry	U&C	Non-profits	Federal ^b	Total	Federal ^b	Industry	Non-profits	Federal ^b
1993		106,054	9,645	90,119	17,100	73,019	1,146	1,806	1,197	116	103	276	114	1,461	1,267	836	101	329	611
1994		107,217	9,190	91,543	16,883	74,660	1,249	1,890	1,262	118	106	287	116	1,436	1,314	849	107	358	596
1995		115,305	9,441	99,227	18,169	81,058	1,270	1,845	1,201	125	110	293	115	1,647	1,260	758	113	389	615
1996		121,359	9,033	105,863	17,066	88,797	1,342	1,790	1,127	128	115	305	115	1,520	1,241	698	120	423	571
1997		126,210	8,903	111,019	17,774	93,245	1,264	1,672	1,035	119	111	298	110	1,426	1,351	673	152	526	573
1998		140,203	8,928	125,040	17,880	107,160	1,218	1,578	955	112	110	293	109	1,480	1,468	736	163	568	491
1999		146,148	8,575	131,604	15,498	116,106	1,128	1,330	679	115	114	308	115	1,563	1,501	693	178	629	446
2000		155,158	7,529	142,041	12,679	129,362	1,069	1,109	422	119	116	329	123	1,440	1,371	480	197	694	599
2001 preliminary		149,187	8,744	134,449	11,463	122,986	1,061	1,187	456	124	118	357	131	1,436	1,468	531	194	743	843
2002 preliminary		146,285	10,024	130,259	11,463	118,796	1,193	1,206	431	128	121	386	139	1,313	1,536	549	187	799	755

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.