TABLE 4. U.S. applied research expenditures, by performing sector and source of funds: 1953–2009

Year	Performer:	All performers	Federal	Industry[a]			Industry FFRDCs[b]	U&C[c]						U&C FFRDCs	Other nonprofit				Nonprofit FFRDCs[d]
	Funding source:	All sources	Federal	Total	Federal[b]	Industry[e]	Total	Total	Federal	Other government[f]	Industry	U&C	Other nonprofit	Total	Total	Federal[d]	Industry	Other nonprofit	Total
		Current $millions																	
1953		1,289	347	726	288	438	NA	134	59	30	7	28	10	48	35	14	11	10	NA
1954		1,378	330	814	322	492	NA	137	60	32	8	28	10	58	40	16	13	11	NA
1955		1,514	333	928	368	560	NA	142	63	32	9	27	11	68	43	18	14	11	NA
1956		1,928	387	1,268	474	794	NA	146	65	33	10	27	11	79	49	21	14	14	NA
1957		2,414	446	1,670	678	992	NA	147	63	34	12	27	11	94	58	24	14	20	NA
1958		2,758	516	1,911	774	1,137	NA	152	66	35	12	27	12	111	69	30	14	25	NA
1959		2,940	577	1,991	813	1,178	NA	167	78	37	13	28	12	121	85	43	15	27	NA
1960		3,065	615	2,029	833	1,196	NA	186	93	39	13	29	12	129	108	63	17	28	NA
1961		3,123	668	1,977	812	1,165	NA	199	104	40	13	30	13	145	135	83	17	35	NA
1962		3,698	709	2,449	1,011	1,438	NA	216	119	41	14	30	13	163	162	98	19	45	NA
1963		3,865	809	2,457	1,007	1,450	NA	230	128	42	14	32	14	186	183	115	19	49	NA
1964		4,201	947	2,538	978	1,560	62	256	142	45	14	37	18	203	196	130	19	47	NA
1965		4,374	994	2,612	992	1,620	46	304	176	46	13	42	27	206	213	140	21	52	NA
1966		4,653	1,012	2,790	986	1,804	53	351	208	47	14	48	34	213	234	153	24	57	NA
1967		4,848	1,069	2,832	983	1,849	83	389	238	46	16	54	36	225	251	166	25	60	NA
1968		5,137	1,112	3,037	956	2,081	87	405	250	46	16	55	39	221	276	186	28	62	NA
1969		5,454	1,229	3,192	920	2,272	95	417	257	48	16	54	43	213	308	210	32	66	NA
1970		5,752	1,334	3,330	952	2,378	97	451	280	51	18	56	47	213	328	225	33	70	NA
1971		5,833	1,355	3,348	907	2,441	67	499	306	61	19	67	47	216	349	241	34	74	NA
1972		6,147	1,434	3,407	845	2,562	107	619	391	74	21	82	52	224	357	243	35	79	NA
1973		6,655	1,527	3,715	883	2,832	110	725	450	88	26	100	62	203	376	257	36	83	NA
1974		7,344	1,652	4,168	905	3,263	120	794	477	96	32	118	72	191	420	290	39	91	NA
1975		8,091	1,912	4,431	991	3,440	139	934	550	113	39	141	92	219	456	315	42	100	NA
1976		8,976	2,068	4,945	1,033	3,912	167	1,042	596	127	45	166	109	263	492	338	45	109	NA
1977		9,662	2,081	5,424	1,113	4,311	212	1,126	626	134	51	194	121	297	523	355	48	120	NA
1978		10,704	2,242	6,065	1,195	4,870	235	1,247	676	151	61	232	128	324	592	409	52	132	NA
1979		12,097	2,415	6,975	1,305	5,670	250	1,418	793	161	71	263	129	360	680	480	55	144	NA
1980		13,714	2,546	8,175	1,625	6,550	275	1,622	912	174	88	308	140	421	675	458	60	158	NA
1981		16,329	2,731	10,401	2,042	8,359	298	1,781	953	199	108	363	159	422	628	391	64	173	68
1982		18,218	2,802	11,956	2,593	9,363	367	1,915	1,007	207	121	402	178	433	655	398	69	189	91
1983		20,298	2,991	13,513	3,227	10,286	414	2,116	1,122	215	141	443	194	473	713	433	74	207	78
1984		22,451	2,961	15,218	3,677	11,541	547	2,332	1,226	234	168	491	212	548	764	459	79	226	80
1985		25,401	3,135	17,625	4,717	12,908	630	2,527	1,296	262	198	547	224	580	822	490	85	247	82
1986		27,240	3,204	19,131	4,049	15,082	629	2,780	1,393	298	229	620	240	554	867	506	91	270	75
1987		27,951	3,366	19,190	4,037	15,153	623	3,219	1,643	333	260	707	276	532	948	555	98	295	74
1988		29,528	3,362	20,377	3,846	16,531	371	3,779	1,958	377	302	818	325	547	1,026	599	105	322	66
1989		32,277	3,566	22,317	4,324	17,993	374	4,188	2,121	417	347	933	370	603	1,159	695	112	352	70
1990		34,897	3,652	24,399	5,967	18,432	386	4,406	2,140	453	377	1,031	404	689	1,284	780	120	384	81
1991		38,631	4,093	27,013	5,588	21,425	433	4,611	2,232	468	392	1,091	428	927	1,468	921	129	419	86
1992		37,936	4,337	25,660	4,476	21,184	507	4,882	2,415	479	414	1,120	454	940	1,528	933	138	456	81
1993		37,283	4,838	24,251	4,295	19,956	435	5,149	2,542	496	443	1,181	487	962	1,544	900	148	497	103
1994		36,618	4,985	22,988	3,616	19,372	503	5,390	2,644	517	464	1,256	509	982	1,659	960	158	541	111
1995		40,936	4,952	26,919	3,164	23,755	535	5,659	2,779	559	494	1,311	516	1,050	1,692	934	170	589	129

TABLE 4. U.S. applied research expenditures, by performing sector and source of funds: 1953–2009

Year	Performer:	All performers	Federal	Industry[a]			Industry FFRDCs[b]	U&C[c]						U&C FFRDCs	Other nonprofit				Nonprofit FFRDCs[d]
	Funding source:	All sources	Federal	Total	Federal[b]	Industry[e]	Total	Total	Federal	Other government[f]	Industry	U&C	Other nonprofit	Total	Total	Federal[d]	Industry	Other nonprofit	Total
1996		43,170	4,872	29,010	3,640	25,370	231	5,885	2,864	584	524	1,390	522	1,270	1,781	960	182	640	122
1997		46,554	4,997	32,430	2,648	29,782	213	5,523	2,550	553	519	1,389	512	1,337	1,926	1,011	205	711	128
1998		46,362	5,146	32,208	2,632	29,576	230	5,197	2,260	526	520	1,378	513	1,372	2,087	1,060	218	809	123
1999		52,007	5,530	36,638	2,817	33,821	274	5,762	2,661	546	542	1,463	550	1,247	2,427	1,300	236	891	130
2000		56,685	6,105	39,176	2,682	36,494	269	6,498	3,196	572	553	1,585	592	1,291	3,155	1,831	258	1,066	190
2001		64,188	7,052	44,012	3,603	40,409	821	7,061	3,558	602	550	1,713	639	1,405	3,593	2,150	261	1,182	244
2002		50,688	7,487	28,533	2,452	26,081	1,090	7,760	4,010	647	546	1,859	698	1,663	3,889	2,267	253	1,369	266
2003		61,135	7,672	37,334	4,473	32,861	1,413	8,644	4,553	731	567	2,038	755	1,600	4,223	2,487	259	1,478	249
2004		69,183	7,455	45,432	4,775	40,657	1,459	8,976	4,781	759	576	2,087	774	1,481	4,186	2,448	264	1,474	194
2005		69,588	7,557	45,284	5,289	39,995	1,414	9,077	4,900	721	573	2,115	768	1,637	4,340	2,432	280	1,628	278
2006		76,277	7,435	51,173	6,140	45,033	1,314	9,440	5,176	710	589	2,182	782	1,827	4,590	2,592	300	1,699	500
2007		83,069	7,222	57,570	8,945	48,625	1,168	9,849	5,396	740	621	2,256	837	1,354	4,812	2,583	318	1,911	1,094
2008		74,321	7,316	46,864	5,397	41,467	1,975	10,875	5,980	808	690	2,460	937	855	5,083	2,600	330	2,154	1,352
2009		71,328	8,006	41,055	7,797	33,258	1,930	11,912	6,577	860	767	2,675	1,033	1,289	5,697	3,062	319	2,317	1,440
		2005 constant $millions																	
1953		7,977	2,147	4,493	1,782	2,710	NA	826	365	186	40	172	62	294	217	87	68	62	NA
1954		8,449	2,020	4,991	1,974	3,017	NA	837	365	193	46	172	61	356	245	98	80	67	NA
1955		9,125	2,008	5,595	2,219	3,376	NA	853	380	195	51	164	63	410	259	109	84	66	NA
1956		11,236	2,253	7,391	2,763	4,628	NA	851	379	193	58	157	64	458	283	119	82	82	NA
1957		13,615	2,513	9,421	3,825	5,596	NA	826	355	191	65	153	62	530	324	133	79	113	NA
1958		15,216	2,847	10,543	4,270	6,273	NA	836	361	195	66	150	63	610	381	166	77	138	NA
1959		16,029	3,144	10,857	4,433	6,424	NA	911	423	202	68	153	65	657	461	232	82	147	NA
1960		16,483	3,305	10,912	4,480	6,432	NA	998	500	208	70	155	65	691	578	336	91	151	NA
1961		16,606	3,552	10,512	4,318	6,195	NA	1,055	550	212	69	157	66	771	715	439	90	186	NA
1962		19,396	3,717	12,847	5,303	7,543	NA	1,133	622	213	71	160	68	852	847	511	100	236	NA
1963		20,059	4,199	12,753	5,227	7,526	NA	1,191	662	219	73	168	70	965	950	597	99	254	NA
1964		21,475	4,838	12,974	5,000	7,975	317	1,306	726	231	69	191	89	1,038	1,002	665	97	240	NA
1965		21,956	4,988	13,113	4,980	8,133	231	1,524	881	233	65	211	133	1,032	1,069	703	105	261	NA
1966		22,712	4,940	13,620	4,813	8,807	259	1,713	1,015	230	68	236	164	1,040	1,140	744	117	278	NA
1967		22,962	5,061	13,413	4,656	8,757	393	1,840	1,125	216	73	255	171	1,066	1,189	786	118	284	NA
1968		23,338	5,050	13,798	4,343	9,454	395	1,840	1,134	209	73	250	175	1,002	1,254	845	127	282	NA
1969		23,613	5,322	13,819	3,983	9,836	411	1,805	1,110	208	69	233	184	922	1,333	909	139	286	NA
1970		23,656	5,486	13,694	3,915	9,779	399	1,853	1,149	210	72	230	191	876	1,349	925	136	288	NA
1971		22,846	5,307	13,113	3,552	9,561	262	1,954	1,199	237	72	262	184	844	1,365	942	133	290	NA
1972		23,079	5,384	12,792	3,173	9,619	402	2,322	1,466	279	77	307	193	841	1,338	910	131	297	NA
1973		23,674	5,433	13,215	3,141	10,074	391	2,577	1,599	312	92	355	219	720	1,337	914	128	295	NA
1974		23,949	5,388	13,592	2,951	10,641	391	2,588	1,554	313	103	384	233	621	1,369	946	126	297	NA
1975		24,107	5,696	13,202	2,953	10,249	414	2,783	1,637	338	115	419	274	653	1,360	939	124	298	NA
1976		25,294	5,828	13,934	2,911	11,023	471	2,936	1,678	359	125	467	307	740	1,385	951	126	309	NA
1977		25,595	5,511	14,368	2,948	11,420	562	2,981	1,657	356	135	514	319	787	1,386	940	127	318	NA
1978		26,495	5,549	15,012	2,958	12,054	582	3,086	1,673	374	150	574	316	802	1,465	1,012	128	326	NA
1979		27,643	5,519	15,939	2,982	12,957	571	3,239	1,811	369	163	601	295	822	1,553	1,097	127	329	NA
1980		28,722	5,332	17,121	3,403	13,717	576	3,397	1,910	364	185	645	294	881	1,414	959	125	330	NA

TABLE 4. U.S. applied research expenditures, by performing sector and source of funds: 1953–2009

Year	Performer:	All performers	Federal	Industry[a]			Industry FFRDCs[b]	U&C[c]						U&C FFRDCs	Other nonprofit				Nonprofit FFRDCs[d]
	Funding source:	All sources	Federal	Total	Federal[b]	Industry[e]	Total	Total	Federal	Other government[f]	Industry	U&C	Other nonprofit	Total	Total	Federal[d]	Industry	Other nonprofit	Total
1981		31,267	5,230	19,916	3,910	16,006	571	3,410	1,824	381	206	694	304	808	1,202	749	122	331	130
1982		32,877	5,056	21,576	4,679	16,897	662	3,455	1,816	374	218	725	321	781	1,183	718	124	341	164
1983		35,238	5,193	23,459	5,602	17,857	719	3,673	1,948	373	245	769	337	822	1,238	751	128	359	135
1984		37,564	4,954	25,462	6,152	19,310	915	3,901	2,052	392	281	822	355	918	1,279	768	132	379	135
1985		41,251	5,091	28,623	7,660	20,963	1,023	4,104	2,106	425	321	889	364	941	1,335	795	138	402	133
1986		43,280	5,091	30,397	6,433	23,963	999	4,417	2,213	473	364	986	381	880	1,377	803	145	429	120
1987		43,158	5,197	29,631	6,233	23,397	962	4,970	2,537	514	401	1,092	426	821	1,464	857	151	456	114
1988		44,079	5,019	30,419	5,741	24,678	554	5,642	2,923	563	451	1,221	485	816	1,531	894	156	481	98
1989		46,430	5,130	32,103	6,220	25,883	538	6,024	3,051	600	499	1,342	532	867	1,667	999	161	506	101
1990		48,333	5,058	33,793	8,265	25,529	535	6,102	2,965	627	522	1,428	560	954	1,778	1,080	167	532	113
1991		51,674	5,475	36,133	7,475	28,658	579	6,167	2,985	626	524	1,459	573	1,239	1,964	1,232	172	560	115
1992		49,568	5,667	33,528	5,849	27,680	662	6,379	3,155	626	541	1,463	594	1,229	1,996	1,220	180	596	106
1993		47,661	6,185	31,002	5,491	25,511	556	6,582	3,249	634	566	1,510	623	1,230	1,974	1,150	189	635	131
1994		45,845	6,242	28,781	4,527	24,254	630	6,748	3,310	648	581	1,572	637	1,229	2,077	1,201	198	677	139
1995		50,206	6,074	33,015	3,880	29,134	656	6,940	3,408	685	606	1,608	633	1,288	2,075	1,145	208	722	158
1996		51,957	5,864	34,915	4,381	30,534	278	7,082	3,446	703	631	1,673	629	1,528	2,144	1,155	219	770	147
1997		55,058	5,909	38,353	3,132	35,222	252	6,531	3,016	654	613	1,643	606	1,582	2,278	1,196	242	840	152
1998		54,218	6,017	37,665	3,078	34,587	269	6,077	2,642	615	608	1,611	600	1,604	2,440	1,240	255	946	144
1999		59,938	6,373	42,225	3,247	38,978	316	6,641	3,067	630	625	1,686	634	1,437	2,797	1,498	272	1,027	149
2000		63,890	6,881	44,156	3,023	41,133	303	7,324	3,603	644	624	1,787	667	1,456	3,556	2,064	291	1,201	214
2001		70,748	7,773	48,510	3,971	44,539	905	7,783	3,921	663	606	1,888	704	1,548	3,960	2,370	287	1,303	268
2002		54,979	8,121	30,948	2,660	28,289	1,183	8,417	4,349	702	593	2,016	757	1,804	4,218	2,458	274	1,485	288
2003		64,944	8,149	39,660	4,752	34,908	1,501	9,183	4,837	777	602	2,165	802	1,700	4,486	2,642	275	1,570	264
2004		71,481	7,702	46,941	4,934	42,007	1,508	9,274	4,940	784	595	2,156	800	1,531	4,325	2,529	273	1,523	201
2005		69,588	7,557	45,284	5,289	39,995	1,414	9,077	4,900	721	573	2,115	768	1,637	4,340	2,432	280	1,628	278
2006		73,890	7,202	49,571	5,948	43,623	1,272	9,144	5,014	688	571	2,114	758	1,770	4,446	2,511	290	1,645	484

TABLE 4. U.S. applied research expenditures, by performing sector and source of funds: 1953–2009

Year	Performer:	All performers	Federal	Industry[a]			Industry FFRDCs[b]	U&C[c]						U&C FFRDCs	Other nonprofit				Nonprofit FFRDCs[d]
	Funding source:	All sources	Federal	Total	Federal[b]	Industry[e]	Total	Total	Federal	Other government[f]	Industry	U&C	Other nonprofit	Total	Total	Federal[d]	Industry	Other nonprofit	Total
2007		78,200	6,798	54,196	8,421	45,775	1,100	9,271	5,079	696	584	2,124	788	1,275	4,530	2,431	300	1,799	1,030
2008		68,446	6,738	43,160	4,970	38,189	1,819	10,015	5,507	744	636	2,265	863	787	4,682	2,395	304	1,984	1,245
2009		65,004	7,296	37,415	7,106	30,309	1,758	10,856	5,994	783	699	2,438	942	1,175	5,192	2,790	290	2,111	1,312

NA = not available; included in figures for federal support to industry and federal support to nonprofit institutions.

FFRDC = federally funded research and development center; U&C = universities and colleges.

[a] Character-of-work estimates for industry revised for 1998 and later years; data are not directly comparable with data for 1997 and earlier years.
[b] Character-of-work estimates for industry FFRDCs for 1953–63 not separated from federal support for industry; thus, figure for federal support to industry includes support to FFRDCs for those years.
[c] For 1998 and later years, character-of-work estimation procedure revised and adjustments made to U&C R&D to eliminate double counting of funds passed through from one academic institution to another. Data for 1998 and later years are not directly comparable with data for 1997 and earlier years.
[d] Character-of-work estimates for nonprofit FFRDCs for 1953–80 not separated from federal support for other nonprofits; thus, figure for federal support to other nonprofit institutions includes support to FFRDCs for those years.
[e] Industry sources of funds for industry R&D expenditures include all nonfederal sources of industry funds for R&D expenditures.
[f] Because of limitations in survey information, data on other government funding to performers other than U&C not available and consequently included in other sectors' support for their own R&D performance (e.g., other government support to other nonprofits included in other nonprofit support for their own R&D).

NOTES: Technical notes explaining methodological issues of measurement available on request. Data based on annual reports by performers, except for nonprofit sector (where some figures involve estimates). R&D expenditures of FFRDCs are chiefly federal funds, but any nonfederal funds are also included in totals. For trend comparisons, use only historical data reported here; do not use data published earlier. Expenditures for industry and, prior to 2001, for industry-administered FFRDCs collected by calendar year. Expenditures for other performers are calendar-year approximations based on fiscal-year data. In most cases, approximation equals 75% of amount reported in same fiscal year plus 25% of amount reported in subsequent fiscal year. However, fiscal year for academic performers generally begins 1 July, not 1 October; also, prior to 1977, federal fiscal year began on 1 July, not 1 October. Therefore, calendar-year approximations for academic performers and federal performers prior to 1977 equal 50% of amount reported in same fiscal year plus 50% of amount reported in subsequent fiscal year. Detail may not add to total because of rounding. Constant-dollar estimates derived from unrounded data. Los Alamos National Laboratory (some $2 billion in annual R&D expenditures in recent years) became industry administered in June 2006; previously, it was U&C administered. Lawrence Livermore National Laboratory (more than $1 billion in annual R&D expenditures in recent years) became industry administered in October 2007; previously, it was U&C administered. Levels of R&D expenditures from 2006 to 2008 for both industry- and U&C-administered FFRDCs reflect these shifts.

SOURCES: National Science Foundation, National Center for Science and Engineering Statistics (NSF/NCSES), National Patterns of R&D Resources, drawing on the following NSF/NCSES surveys: Business R&D and Innovation Survey, Survey of R&D Expenditures at Universities and Colleges, Survey of Federal Funds for R&D, Survey of R&D Expenditures at FFRDCs, Survey of R&D Funding and Performance by Nonprofit Organizations.