TABLE 7

U.S. basic research expenditures, by source of funds and performing sector: 1953–2023

(Millions of current and of constant 2017 dollars)

Year	All funding sources	Federal							Nonfederal government					Business					Higher education		NPOs				
	All performers	Total	Federal intramural	FFRDC	Nonfederal government	Business	Higher education	NPO	Total	FFRDC	Nonfederal government	Business	Higher education	Total	FFRDC	Business	Higher education	NPO	Total	Higher education	Total	FFRDC	Business	Higher education	NPO
Current $millions																									
1953	460	265	102	36	NA	19	82	27	7	NA	NA	NA	7	154	NA	132	13	9	6	6	28	NA	NA	16	12
1954	509	291	96	45	NA	23	97	31	10	NA	NA	NA	10	169	NA	143	15	11	8	8	31	NA	NA	18	13
1955	570	318	98	62	NA	7	117	35	14	NA	NA	NA	14	192	NA	162	17	13	12	12	35	NA	NA	21	14
1956	718	392	114	89	NA	7	143	41	19	NA	NA	NA	19	251	NA	216	20	15	15	15	41	NA	NA	24	17
1957	813	451	124	110	NA	4	167	48	25	NA	NA	NA	25	268	NA	230	23	15	20	20	50	NA	NA	27	23
1958	943	537	149	115	NA	14	202	58	31	NA	NA	NA	31	292	NA	252	24	16	24	24	59	NA	NA	31	28
1959	1,087	665	165	134	NA	34	263	71	38	NA	NA	NA	38	290	NA	248	24	18	28	28	66	NA	NA	36	30
1960	1,286	794	184	150	NA	36	341	84	45	NA	NA	NA	45	343	NA	297	25	21	33	33	71	NA	NA	41	30
1961	1,511	972	230	177	NA	30	432	104	54	NA	NA	NA	54	361	NA	314	25	22	40	40	85	NA	NA	48	37
1962	1,824	1,218	252	189	NA	104	546	128	64	NA	NA	NA	64	394	NA	345	25	24	48	48	101	NA	NA	55	46
1963	2,115	1,446	285	216	NA	109	689	147	75	NA	NA	NA	75	425	NA	375	25	25	58	58	113	NA	NA	63	50
1964	2,396	1,693	339	245	NA	123	824	163	84	NA	NA	NA	84	434	NA	384	25	25	70	70	115	NA	NA	68	47
1965	2,664	1,900	375	250	NA	157	944	175	94	NA	NA	NA	94	462	NA	406	27	29	86	86	122	NA	NA	70	52
1966	2,930	2,075	410	273	NA	142	1,066	184	104	NA	NA	NA	104	512	NA	451	29	32	106	106	133	NA	NA	75	58
1967	3,168	2,280	434	301	NA	168	1,188	190	114	NA	NA	NA	114	495	NA	427	34	34	136	136	144	NA	NA	83	61
1968	3,376	2,399	482	315	NA	145	1,265	192	131	NA	NA	NA	131	537	NA	462	38	37	156	156	154	NA	NA	91	63
1969	3,491	2,457	545	313	NA	123	1,288	188	153	NA	NA	NA	153	541	NA	458	40	43	171	171	170	NA	NA	103	67
1970	3,594	2,501	562	304	NA	122	1,323	191	179	NA	NA	NA	179	531	NA	444	43	44	196	196	187	NA	NA	115	72
1971	3,720	2,559	581	289	NA	101	1,385	204	194	NA	NA	NA	194	551	NA	456	50	45	214	214	204	NA	NA	127	77
1972	3,850	2,656	603	313	NA	91	1,437	213	195	NA	NA	NA	195	565	NA	463	55	47	216	216	218	NA	NA	134	84
1973	4,099	2,847	652	382	NA	96	1,489	229	196	NA	NA	NA	196	607	NA	499	59	49	223	223	227	NA	NA	137	90
1974	4,511	3,146	715	467	NA	114	1,609	242	204	NA	NA	NA	204	656	NA	536	66	54	250	250	254	NA	NA	153	102
1975	4,875	3,415	760	533	NA	104	1,768	251	212	NA	NA	NA	212	704	NA	573	72	59	264	264	280	NA	NA	164	116
1976	5,373	3,793	850	629	NA	116	1,924	274	218	NA	NA	NA	218	774	NA	634	75	65	283	283	305	NA	NA	175	131
1977	6,008	4,235	943	746	NA	135	2,114	297	232	NA	NA	NA	232	862	NA	701	89	72	334	334	346	NA	NA	198	148
1978	6,959	4,950	1,044	1,005	NA	156	2,399	346	260	NA	NA	NA	260	970	NA	785	107	79	398	398	380	NA	NA	213	168
1979	7,836	5,558	1,112	1,160	NA	161	2,719	406	286	NA	NA	NA	286	1,107	NA	893	128	87	466	466	419	NA	NA	229	190
1980	8,747	6,147	1,212	1,294	NA	170	3,061	411	307	NA	NA	NA	307	1,286	NA	1,035	156	95	544	544	463	NA	NA	248	215
1981	9,658	6,591	1,343	1,430	NA	164	3,331	324	338	NA	NA	NA	338	1,600	NA	1,313	183	105	615	615	512	NA	NA	269	243
1982	10,651	7,121	1,522	1,503	NA	253	3,475	369	368	NA	NA	NA	368	1,854	NA	1,523	215	115	716	716	591	NA	NA	317	275
1983	11,880	7,853	1,733	1,661	NA	346	3,689	426	396	NA	NA	NA	396	2,146	NA	1,760	260	127	816	816	668	NA	NA	358	311
1984	13,332	8,651	1,877	1,854	NA	340	4,087	494	436	NA	NA	NA	436	2,584	NA	2,132	313	139	915	915	746	NA	NA	395	351
1985	14,748	9,407	1,947	1,936	NA	358	4,606	560	514	NA	NA	NA	514	2,915	NA	2,373	389	153	1,075	1,075	837	NA	NA	440	397

TABLE 7

U.S. basic research expenditures, by source of funds and performing sector: 1953–2023

(Millions of current and of constant 2017 dollars)

Year	All funding sources	Federal							Nonfederal government					Business					Higher education		NPOs				
	All performers	Total	Federal intramural	FFRDC	Nonfederal government	Business	Higher education	NPO	Total	FFRDC	Nonfederal government	Business	Higher education	Total	FFRDC	Business	Higher education	NPO	Total	Higher education	Total	FFRDC	Business	Higher education	NPO
1986	17,154	10,220	2,026	2,045	NA	434	5,122	594	606	NA	NA	NA	606	4,130	NA	3,496	466	168	1,262	1,262	936	NA	NA	488	449
1987	18,481	11,090	2,047	2,242	NA	598	5,527	675	659	NA	NA	NA	659	4,282	NA	3,583	514	185	1,399	1,399	1,052	NA	NA	545	507
1988	19,787	12,097	2,116	2,633	NA	656	5,937	756	705	NA	NA	NA	705	4,275	NA	3,507	565	203	1,530	1,530	1,180	NA	NA	607	573
1989	21,891	13,392	2,309	2,815	NA	986	6,422	860	766	NA	NA	NA	766	4,692	NA	3,832	637	223	1,714	1,714	1,327	NA	NA	680	647
1990	23,029	14,057	2,319	3,033	NA	869	6,889	947	847	NA	NA	NA	847	4,710	NA	3,760	705	245	1,929	1,929	1,486	NA	NA	756	730
1991	27,140	15,283	2,378	3,195	NA	1,251	7,423	1,036	912	NA	NA	NA	912	7,157	NA	6,125	764	269	2,127	2,127	1,660	NA	NA	836	825
1992	27,604	15,710	2,419	3,408	NA	712	8,058	1,114	941	NA	NA	NA	941	6,925	NA	5,816	814	295	2,203	2,203	1,824	NA	NA	893	931
1993	28,743	16,399	2,621	3,517	NA	466	8,638	1,157	952	NA	NA	NA	952	7,136	NA	5,961	851	324	2,268	2,268	1,987	NA	NA	936	1,051
1994	29,651	16,770	2,547	3,512	NA	436	9,139	1,137	992	NA	NA	NA	992	7,323	NA	6,078	890	356	2,406	2,406	2,160	NA	NA	974	1,186
1995	29,610	16,990	2,689	3,307	NA	190	9,634	1,170	1,070	NA	NA	NA	1,070	6,715	NA	5,379	945	390	2,511	2,511	2,326	NA	NA	987	1,338
1996	32,799	18,063	2,680	3,393	NA	650	10,092	1,248	1,149	NA	NA	NA	1,149	8,309	NA	6,848	1,032	428	2,740	2,740	2,539	NA	NA	1,028	1,510
1997	36,717	19,254	2,746	3,404	NA	1,029	10,758	1,317	1,233	NA	NA	NA	1,233	10,376	NA	8,766	1,161	449	3,150	3,150	2,704	NA	NA	1,147	1,557
1998	34,842	20,473	3,003	3,441	NA	1,002	11,567	1,461	1,292	NA	NA	NA	1,292	6,606	NA	4,851	1,278	477	3,495	3,495	2,976	NA	NA	1,259	1,717
1999	38,282	22,364	3,347	3,719	NA	1,108	12,456	1,734	1,386	NA	NA	NA	1,386	7,429	NA	5,537	1,375	517	3,848	3,848	3,255	NA	NA	1,396	1,860
2000	42,033	24,295	3,765	4,037	NA	925	13,469	2,099	1,501	NA	NA	NA	1,501	8,134	NA	6,115	1,453	566	4,314	4,314	3,790	NA	NA	1,553	2,236
2001	46,363	26,323	4,260	3,925	NA	754	14,919	2,464	1,615	10	NA	NA	1,606	9,400	62	7,299	1,467	571	4,759	4,759	4,267	95	NA	1,704	2,467
2002	50,400	29,724	4,511	4,612	NA	888	17,139	2,575	1,761	16	NA	NA	1,745	8,739	69	6,659	1,456	554	5,311	5,311	4,865	141	NA	1,891	2,833
2003	54,823	32,842	4,664	4,858	NA	1,386	19,220	2,714	1,910	17	NA	NA	1,893	9,017	70	6,944	1,436	567	5,692	5,692	5,363	129	NA	1,978	3,256
2004	56,379	34,124	4,697	4,837	NA	1,072	20,730	2,788	2,013	13	NA	NA	2,000	8,878	54	6,763	1,483	578	5,965	5,965	5,399	72	NA	2,067	3,259
2005	59,899	35,561	4,770	4,995	NA	1,108	21,786	2,902	2,080	12	NA	NA	2,068	9,828	54	7,559	1,600	614	6,568	6,568	5,861	70	NA	2,226	3,565
2006	61,552	36,368	4,716	5,074	16	1,444	22,270	2,849	2,232	11	30	NA	2,191	9,424	63	6,940	1,765	656	7,288	7,288	6,239	74	NA	2,431	3,735
2007	66,488	37,962	4,621	5,166	20	2,780	22,546	2,829	2,449	11	38	NA	2,400	11,206	64	8,488	1,956	698	7,932	7,932	6,939	76	NA	2,733	4,130
2008	70,468	37,821	4,957	5,336	26	1,475	22,954	3,073	2,645	12	47	12	2,573	13,794	75	10,864	2,131	724	8,467	8,467	7,741	79	18	3,002	4,643
2009	74,409	39,254	5,441	5,907	33	1,340	23,034	3,498	2,541	14	57	13	2,457	16,157	67	13,397	1,996	698	8,258	8,258	8,199	79	34	3,035	5,051
2010	76,475	40,135	5,111	6,475	39	1,406	23,690	3,414	2,368	18	63	10	2,277	17,452	67	14,897	1,785	703	8,016	8,016	8,504	77	58	2,989	5,381
2011	73,691	39,289	5,047	6,333	41	677	24,111	3,081	2,339	11	62	21	2,245	14,902	67	12,284	1,807	744	8,512	8,512	8,649	64	38	3,043	5,504
2012	73,992	38,227	5,489	5,530	40	644	23,432	3,092	2,284	14	59	10	2,202	15,305	61	12,611	1,869	764	9,257	9,257	8,919	57	29	3,200	5,634
2013	79,255	36,282	5,330	4,085	38	1,196	22,602	3,031	2,294	12	54	21	2,208	21,047	53	18,203	1,979	813	9,927	9,927	9,705	39	88	3,442	6,137
2014	82,894	37,043	5,705	4,077	42	2,044	22,085	3,090	2,321	6	57	17	2,242	22,760	53	19,757	2,091	859	10,352	10,352	10,418	34	119	3,637	6,629
2015	84,428	37,240	5,890	4,043	42	2,038	22,193	3,034	2,375	4	59	14	2,299	22,770	47	19,621	2,211	891	10,985	10,985	11,057	32	120	3,826	7,080
2016	87,494	38,882	6,119	4,112	38	2,037	22,588	3,988	2,610	5	55	20	2,359	25,935	44	22,879	2,296	716	11,725	11,606	8,342	35	117	4,050	4,141
2017	90,118	39,277	6,259	4,054	41	1,853	23,345	3,726	2,659	6	55	17	2,392	26,945	38	23,644	2,417	844	12,401	12,278	8,835	30	103	4,379	4,322
2018	97,803	42,356	6,827	4,188	45	2,535	24,487	4,274	2,739	9	57	12	2,454	30,183	39	26,545	2,605	989	13,128	13,001	9,397	33	112	4,758	4,494
2019	104,880	44,480	7,352	4,501	52	2,349	25,467	4,760	2,850	10	62	15	2,535	34,060	36	30,132	2,731	1,157	13,757	13,627	9,732	33	86	4,950	4,660

TABLE 7

U.S. basic research expenditures, by source of funds and performing sector: 1953–2023

(Millions of current and of constant 2017 dollars)

Year	All funding sources	Federal							Nonfederal government					Business					Higher education		NPOs				
	All performers	Total	Federal intramural	FFRDC	Nonfederal government	Business	Higher education	NPO	Total	FFRDC	Nonfederal government	Business	Higher education	Total	FFRDC	Business	Higher education	NPO	Total	Higher education	Total	FFRDC	Business	Higher education	NPO
2020	111,637	45,952	7,316	4,714	54	2,200	26,499	5,169	2,988	9	64	23	2,624	38,281	35	34,047	2,744	1,452	14,204	14,061	10,212	32	101	4,894	5,183
2021	118,624	47,383	6,610	4,999	53	2,404	28,673	4,645	2,999	8	61	39	2,737	42,630	37	38,305	2,883	1,404	14,984	14,855	10,628	31	97	4,895	5,604
2022[a]	130,252	52,866	7,859	5,312	54	2,480	31,605	5,556	3,249	7	62	21	2,948	45,778	39	40,768	3,139	1,829	16,831	16,609	11,527	30	86	5,320	6,090
2023[b]	138,161	55,998	7,966	5,799	54	2,637	33,957	5,585	3,452	7	62	22	3,148	48,202	44	42,984	3,333	1,839	18,436	18,212	12,073	35	92	5,823	6,121
Constant 2017 $millions																									
1953	3,417	1,971	755	268	NA	141	606	201	48	NA	NA	NA	48	1,145	NA	982	97	67	45	45	208	NA	NA	119	89
1954	3,747	2,141	707	328	NA	169	711	225	70	NA	NA	NA	70	1,245	NA	1,054	111	81	62	62	228	NA	NA	133	96
1955	4,130	2,304	706	449	NA	51	844	254	101	NA	NA	NA	101	1,391	NA	1,174	123	94	84	84	250	NA	NA	149	101
1956	5,029	2,748	795	624	NA	47	998	284	133	NA	NA	NA	133	1,755	NA	1,513	137	105	108	108	284	NA	NA	165	119
1957	5,518	3,062	841	743	NA	27	1,129	322	168	NA	NA	NA	168	1,814	NA	1,560	153	102	134	134	339	NA	NA	183	156
1958	6,254	3,562	988	763	NA	90	1,340	381	206	NA	NA	NA	206	1,936	NA	1,671	159	106	159	159	391	NA	NA	206	186
1959	7,110	4,353	1,076	873	NA	222	1,717	464	246	NA	NA	NA	246	1,897	NA	1,622	157	118	186	186	428	NA	NA	232	196
1960	8,296	5,121	1,184	968	NA	230	2,197	542	290	NA	NA	NA	290	2,210	NA	1,917	158	136	216	216	458	NA	NA	265	194
1961	9,649	6,207	1,466	1,130	NA	195	2,755	661	343	NA	NA	NA	343	2,305	NA	2,005	160	140	254	254	540	NA	NA	303	236
1962	11,509	7,686	1,590	1,192	NA	658	3,442	804	402	NA	NA	NA	402	2,486	NA	2,177	158	151	302	302	634	NA	NA	344	290
1963	13,193	9,018	1,774	1,347	NA	682	4,297	917	467	NA	NA	NA	467	2,648	NA	2,339	153	156	359	359	702	NA	NA	390	312
1964	14,720	10,401	2,083	1,505	NA	756	5,059	998	518	NA	NA	NA	518	2,666	NA	2,359	154	154	428	428	707	NA	NA	418	289
1965	16,073	11,463	2,260	1,508	NA	947	5,693	1,056	570	NA	NA	NA	570	2,784	NA	2,450	160	175	519	519	736	NA	NA	422	314
1966	17,196	12,178	2,406	1,602	NA	833	6,256	1,080	608	NA	NA	NA	608	3,005	NA	2,647	170	188	625	625	781	NA	NA	440	340
1967	18,065	13,001	2,472	1,717	NA	958	6,773	1,081	649	NA	NA	NA	649	2,820	NA	2,435	191	194	774	774	821	NA	NA	473	348
1968	18,468	13,120	2,637	1,720	NA	793	6,920	1,050	715	NA	NA	NA	715	2,935	NA	2,527	205	202	855	855	842	NA	NA	498	345
1969	18,203	12,811	2,843	1,632	NA	641	6,714	980	797	NA	NA	NA	797	2,819	NA	2,388	206	224	893	893	884	NA	NA	535	349
1970	17,802	12,390	2,783	1,506	NA	604	6,551	946	888	NA	NA	NA	888	2,630	NA	2,199	213	218	969	969	924	NA	NA	567	357
1971	17,537	12,062	2,740	1,360	NA	476	6,527	959	913	NA	NA	NA	913	2,595	NA	2,150	233	212	1,008	1,008	959	NA	NA	596	363
1972	17,397	12,000	2,723	1,412	NA	411	6,494	960	883	NA	NA	NA	883	2,553	NA	2,092	249	212	976	976	985	NA	NA	606	380
1973	17,562	12,196	2,793	1,636	NA	411	6,377	979	841	NA	NA	NA	841	2,598	NA	2,138	251	210	956	956	970	NA	NA	585	386
1974	17,729	12,366	2,809	1,836	NA	448	6,324	949	801	NA	NA	NA	801	2,578	NA	2,107	259	212	983	983	1,000	NA	NA	599	401
1975	17,535	12,285	2,733	1,916	NA	374	6,360	903	764	NA	NA	NA	764	2,532	NA	2,061	257	213	948	948	1,005	NA	NA	590	416
1976	18,320	12,931	2,898	2,145	NA	396	6,560	933	742	NA	NA	NA	742	2,640	NA	2,162	256	222	966	966	1,041	NA	NA	595	446
1977	19,287	13,594	3,027	2,395	NA	433	6,786	953	744	NA	NA	NA	744	2,766	NA	2,250	286	230	1,073	1,073	1,110	NA	NA	634	476
1978	20,870	14,846	3,132	3,014	NA	468	7,195	1,038	779	NA	NA	NA	779	2,910	NA	2,354	319	237	1,194	1,194	1,140	NA	NA	637	503
1979	21,702	15,394	3,081	3,212	NA	446	7,530	1,125	792	NA	NA	NA	792	3,066	NA	2,473	353	240	1,291	1,291	1,160	NA	NA	634	526
1980	22,216	15,613	3,079	3,286	NA	432	7,773	1,043	779	NA	NA	NA	779	3,267	NA	2,629	396	242	1,381	1,381	1,175	NA	NA	630	545

TABLE 7

U.S. basic research expenditures, by source of funds and performing sector: 1953–2023

(Millions of current and of constant 2017 dollars)

Year	All funding sources	Federal							Nonfederal government					Business					Higher education		NPOs				
	All performers	Total	Federal intramural	FFRDC	Nonfederal government	Business	Higher education	NPO	Total	FFRDC	Nonfederal government	Business	Higher education	Total	FFRDC	Business	Higher education	NPO	Total	Higher education	Total	FFRDC	Business	Higher education	NPO
1981	22,409	15,295	3,116	3,318	NA	381	7,729	751	784	NA	NA	NA	784	3,714	NA	3,047	424	243	1,428	1,428	1,189	NA	NA	625	564
1982	23,275	15,562	3,325	3,285	NA	553	7,593	807	804	NA	NA	NA	804	4,051	NA	3,328	471	252	1,565	1,565	1,292	NA	NA	692	600
1983	24,984	16,515	3,644	3,492	NA	728	7,757	895	832	NA	NA	NA	832	4,514	NA	3,701	546	266	1,716	1,716	1,406	NA	NA	752	653
1984	27,060	17,560	3,809	3,763	NA	690	8,295	1,003	884	NA	NA	NA	884	5,245	NA	4,327	635	282	1,857	1,857	1,514	NA	NA	801	713
1985	29,017	18,508	3,831	3,810	NA	704	9,061	1,102	1,012	NA	NA	NA	1,012	5,735	NA	4,669	765	301	2,116	2,116	1,646	NA	NA	865	781
1986	33,084	19,711	3,907	3,945	NA	837	9,878	1,145	1,168	NA	NA	NA	1,168	7,965	NA	6,743	898	324	2,434	2,434	1,806	NA	NA	940	865
1987	34,782	20,871	3,853	4,220	NA	1,125	10,401	1,271	1,239	NA	NA	NA	1,239	8,058	NA	6,743	967	347	2,634	2,634	1,980	NA	NA	1,026	954
1988	35,971	21,992	3,847	4,786	NA	1,193	10,792	1,375	1,282	NA	NA	NA	1,282	7,771	NA	6,375	1,027	369	2,781	2,781	2,145	NA	NA	1,104	1,041
1989	38,294	23,428	4,039	4,925	NA	1,725	11,234	1,505	1,339	NA	NA	NA	1,339	8,208	NA	6,703	1,115	389	2,999	2,999	2,320	NA	NA	1,189	1,131
1990	38,832	23,703	3,910	5,115	NA	1,465	11,616	1,597	1,428	NA	NA	NA	1,428	7,942	NA	6,340	1,190	412	3,253	3,253	2,506	NA	NA	1,275	1,232
1991	44,266	24,927	3,879	5,211	NA	2,040	12,107	1,690	1,487	NA	NA	NA	1,487	11,674	NA	9,990	1,246	438	3,470	3,470	2,708	NA	NA	1,363	1,345
1992	44,020	25,054	3,857	5,434	NA	1,135	12,850	1,777	1,501	NA	NA	NA	1,501	11,044	NA	9,275	1,299	470	3,513	3,513	2,909	NA	NA	1,425	1,485
1993	44,775	25,546	4,083	5,479	NA	726	13,456	1,802	1,484	NA	NA	NA	1,484	11,116	NA	9,286	1,326	504	3,534	3,534	3,095	NA	NA	1,458	1,637
1994	45,225	25,577	3,884	5,356	NA	665	13,938	1,734	1,512	NA	NA	NA	1,512	11,170	NA	9,270	1,357	542	3,670	3,670	3,295	NA	NA	1,486	1,809
1995	44,235	25,381	4,018	4,940	NA	284	14,392	1,748	1,598	NA	NA	NA	1,598	10,031	NA	8,036	1,412	583	3,751	3,751	3,475	NA	NA	1,475	2,000
1996	48,118	26,499	3,931	4,978	NA	954	14,805	1,831	1,686	NA	NA	NA	1,686	12,189	NA	10,046	1,514	629	4,019	4,019	3,724	NA	NA	1,509	2,215
1997	52,951	27,767	3,960	4,909	NA	1,484	15,515	1,899	1,779	NA	NA	NA	1,779	14,964	NA	12,642	1,674	648	4,542	4,542	3,900	NA	NA	1,655	2,245
1998	49,690	29,198	4,282	4,907	NA	1,429	16,496	2,083	1,843	NA	NA	NA	1,843	9,421	NA	6,918	1,822	680	4,984	4,984	4,244	NA	NA	1,796	2,448
1999	53,834	31,449	4,706	5,229	NA	1,558	17,517	2,438	1,949	NA	NA	NA	1,949	10,447	NA	7,786	1,934	727	5,412	5,412	4,578	NA	NA	1,963	2,615
2000	57,800	33,407	5,177	5,551	NA	1,272	18,521	2,887	2,064	NA	NA	NA	2,064	11,185	NA	8,409	1,998	779	5,932	5,932	5,211	NA	NA	2,136	3,075
2001	62,350	35,399	5,729	5,279	NA	1,014	20,063	3,314	2,172	13	NA	NA	2,159	12,641	83	9,816	1,973	768	6,400	6,400	5,738	128	NA	2,292	3,318
2002	66,742	39,362	5,973	6,108	NA	1,176	22,696	3,410	2,333	22	NA	NA	2,311	11,572	92	8,818	1,929	734	7,033	7,033	6,442	186	NA	2,504	3,751
2003	71,193	42,648	6,057	6,308	NA	1,800	24,958	3,525	2,480	22	NA	NA	2,458	11,709	92	9,017	1,865	736	7,391	7,391	6,964	168	NA	2,568	4,228
2004	71,297	43,153	5,940	6,117	NA	1,356	26,215	3,526	2,546	17	NA	NA	2,529	11,227	68	8,552	1,876	731	7,544	7,544	6,827	91	NA	2,614	4,122
2005	73,445	43,604	5,849	6,124	NA	1,359	26,713	3,559	2,551	15	NA	NA	2,536	12,051	67	9,268	1,962	753	8,054	8,054	7,187	86	NA	2,730	4,371
2006	73,214	43,258	5,609	6,035	19	1,718	26,489	3,389	2,655	13	36	NA	2,606	11,210	75	8,255	2,099	781	8,669	8,669	7,421	88	NA	2,891	4,442
2007	76,998	43,963	5,352	5,982	23	3,219	26,110	3,276	2,837	13	44	NA	2,780	12,977	74	9,830	2,266	808	9,186	9,186	8,036	88	NA	3,165	4,782
2008	80,066	42,972	5,632	6,063	30	1,676	26,080	3,492	3,005	14	53	14	2,924	15,673	85	12,343	2,421	823	9,620	9,620	8,796	89	20	3,410	5,275
2009	84,025	44,327	6,144	6,671	38	1,513	26,011	3,950	2,869	16	64	15	2,774	18,245	75	15,128	2,253	789	9,326	9,326	9,258	89	38	3,427	5,704
2010	85,321	44,778	5,702	7,224	44	1,569	26,430	3,809	2,642	20	71	11	2,540	19,470	75	16,620	1,991	784	8,943	8,943	9,488	86	65	3,334	6,003
2011	80,553	42,948	5,517	6,922	44	740	26,356	3,368	2,557	12	68	23	2,454	16,290	74	13,428	1,975	813	9,304	9,304	9,454	70	41	3,326	6,017
2012	79,404	41,023	5,890	5,934	42	691	25,146	3,318	2,451	15	64	10	2,363	16,425	65	13,534	2,006	820	9,934	9,934	9,571	61	31	3,434	6,046
2013	83,628	38,284	5,624	4,311	40	1,262	23,849	3,198	2,421	13	57	22	2,329	22,208	55	19,208	2,088	857	10,474	10,474	10,241	41	93	3,631	6,476
2014	85,971	38,418	5,917	4,228	43	2,120	22,905	3,205	2,407	7	59	17	2,325	23,605	55	20,490	2,169	891	10,736	10,736	10,805	35	123	3,771	6,875

TABLE 7

U.S. basic research expenditures, by source of funds and performing sector: 1953–2023

(Millions of current and of constant 2017 dollars)

Year	All funding sources	Federal							Nonfederal government					Business					Higher education		NPOs				
	All performers	Total	Federal intramural	FFRDC	Nonfederal government	Business	Higher education	NPO	Total	FFRDC	Nonfederal government	Business	Higher education	Total	FFRDC	Business	Higher education	NPO	Total	Higher education	Total	FFRDC	Business	Higher education	NPO
2015	86,757	38,267	6,053	4,155	43	2,094	22,805	3,118	2,441	5	60	14	2,362	23,399	49	20,162	2,272	916	11,288	11,288	11,362	33	123	3,932	7,275
2016	89,061	39,579	6,229	4,185	39	2,074	22,992	4,059	2,657	5	56	20	2,401	26,399	45	23,288	2,337	729	11,935	11,814	8,492	35	119	4,122	4,215
2017	90,118	39,277	6,259	4,054	41	1,853	23,345	3,726	2,659	6	55	17	2,392	26,945	38	23,644	2,417	844	12,401	12,278	8,835	30	103	4,379	4,322
2018	95,613	41,407	6,674	4,094	44	2,479	23,939	4,178	2,678	9	55	12	2,399	29,507	38	25,951	2,547	967	12,834	12,710	9,187	32	109	4,651	4,393
2019	100,866	42,778	7,071	4,328	50	2,259	24,492	4,578	2,741	10	59	15	2,438	32,757	35	28,979	2,626	1,113	13,231	13,105	9,360	32	83	4,761	4,482
2020	105,957	43,614	6,944	4,474	52	2,088	25,151	4,906	2,836	8	60	22	2,490	36,333	33	32,314	2,604	1,378	13,482	13,345	9,693	30	96	4,645	4,919
2021	107,672	43,008	5,999	4,537	49	2,182	26,025	4,216	2,722	7	56	36	2,484	38,694	33	34,768	2,616	1,274	13,600	13,483	9,647	28	88	4,443	5,086
2022[a]	110,358	44,791	6,659	4,501	46	2,101	26,777	4,708	2,753	6	53	18	2,498	38,786	33	34,542	2,659	1,550	14,261	14,072	9,766	25	73	4,507	5,160
2023[b]	112,993	45,797	6,515	4,743	44	2,157	27,772	4,567	2,824	6	51	18	2,575	39,421	36	35,154	2,726	1,504	15,077	14,894	9,874	28	75	4,763	5,006

NA = not available.

FFRDC = federally funded research and development center; NPO = nonprofit organization.

[a] Some data for 2022 are preliminary and may be revised later.

[b] The data for 2023 include estimates and are likely to be revised later.

Note(s):

This table reaggregates the R&D performer data in table 3 according to major categories of R&D funding: federal government, nonfederal government (state and local), business, higher education, and NPOs. Business sources of R&D funding in this table include the own funds of domestic R&D-performing businesses, funds from other domestic businesses, and funds from foreign businesses. For further detail on the R&D performers listed, see table 2, footnotes a–f. For detail on type-of-R&D data, see table 3, footnotes b–f. Detail may not add to total because of rounding. Constant-dollar estimates are derived from unrounded data. For trend comparisons, use only the historical data reported in this table because some back-year data may have been revised. Data are based on reports by performers in the National Center for Science and Engineering Statistics annual surveys on R&D expenditures: Business Enterprise Research and Development Survey, Annual Business Survey, Higher Education Research and Development Survey, Survey of Federal Funds for Research and Development, FFRDC Research and Development Survey, and Survey of State Government Research and Development. R&D expenditures by business performers—and, before 2001, also industry-administered FFRDCs—were collected on a calendar year basis. Expenditures for other performers are calendar year approximations based on fiscal year data. (See also table 3, general notes.)

Source(s):

National Center for Science and Engineering Statistics, National Patterns of R&D Resources (annual series).