Table 7. Total and federally financed higher education R&D expenditures at institutions in the standard form survey population, by type of R&D: FYs 1953–2025

(Dollars in millions)

	Total					Federal				
		Basic research		Applied research and experimental development			Basic research		Applied research and experimental development	
Fiscal year	All R&D expenditures	Amount	Percent	Amount	Percent	All federal R&D expenditures	Amount	Percent	Amount	Percent
Total, S&E[a]										
1953	255	110	43.1	145	56.9	138	na	na	na	na
1954	290	136	46.9	154	53.1	160	na	na	na	na
1955	312	159	51.0	153	49.0	169	na	na	na	na
1956	372	200	53.8	172	46.2	213	na	na	na	na
1957	410	240	58.5	170	41.5	229	na	na	na	na
1958	456	281	61.6	175	38.4	254	na	na	na	na
1959	526	343	65.2	183	34.8	306	na	na	na	na
1960	646	433	67.0	213	33.0	405	na	na	na	na
1961	763	536	70.2	227	29.8	500	na	na	na	na
1962	904	659	72.9	245	27.1	613	na	na	na	na
1963	1,081	814	75.3	267	24.7	760	na	na	na	na
1964	1,275	1,003	78.7	272	21.3	917	na	na	na	na
1965	1,474	1,138	77.2	336	22.8	1,073	na	na	na	na
1966	1,715	1,303	76.0	412	24.0	1,261	na	na	na	na
1967	1,921	1,457	75.8	464	24.2	1,409	na	na	na	na
1968	2,149	1,650	76.8	499	23.2	1,572	na	na	na	na
1969	2,225	1,711	76.9	514	23.1	1,600	na	na	na	na
1970	2,335	1,796	76.9	539	23.1	1,647	na	na	na	na
1971	2,500	1,914	76.6	586	23.4	1,724	na	na	na	na
1972	2,630	2,022	76.9	608	23.1	1,795	1,420	79.1	375	20.9
1973	2,884	2,053	71.2	831	28.8	1,985	1,454	73.2	531	26.8
1974	3,023	2,154	71.3	869	28.7	2,032	1,523	74.9	509	25.1
1975	3,409	2,410	70.7	999	29.3	2,288	1,695	74.1	593	25.9
1976	3,729	2,549	68.4	1,180	31.6	2,512	1,841	73.3	671	26.7
1977	4,067	2,800	68.8	1,267	31.2	2,726	2,007	73.6	720	26.4
1978[b]	4,625	na	na	na	na	3,059	na	na	na	na
1979	5,366	3,619	67.4	1,747	32.6	3,598	2,577	71.6	1,022	28.4
1980	6,063	4,036	66.6	2,026	33.4	4,098	2,861	69.8	1,237	30.2
1981	6,847	4,594	67.1	2,253	32.9	4,571	3,260	71.3	1,311	28.7
1982	7,324	4,879	66.6	2,445	33.4	4,768	3,402	71.3	1,367	28.7
1983	7,882	5,303	67.3	2,579	32.7	4,989	3,547	71.1	1,442	28.9
1984	8,620	5,733	66.5	2,887	33.5	5,431	3,830	70.5	1,601	29.5
1985	9,687	6,556	67.7	3,131	32.3	6,064	4,343	71.6	1,722	28.4
1986	10,928	7,492	68.6	3,435	31.4	6,712	4,868	72.5	1,844	27.5
1987	12,153	8,393	69.1	3,760	30.9	7,343	5,375	73.2	1,968	26.8
1988	13,463	8,894	66.1	4,569	33.9	8,193	5,678	69.3	2,515	30.7
1989	14,979	9,793	65.4	5,186	34.6	8,993	6,195	68.9	2,797	31.1
1990	16,290	10,645	65.3	5,645	34.7	9,640	6,649	69.0	2,991	31.0
1991	17,589	11,607	66.0	5,982	34.0	10,238	7,128	69.6	3,110	30.4
1992	18,821	12,516	66.5	6,305	33.5	11,095	7,718	69.6	3,377	30.4
1993	19,954	13,303	66.7	6,651	33.3	11,960	8,398	70.2	3,562	29.8
1994	21,035	13,989	66.5	7,046	33.5	12,654	8,878	70.2	3,775	29.8
1995	22,179	14,812	66.8	7,367	33.2	13,337	9,399	70.5	3,938	29.5
1996	23,055	15,481	67.1	7,574	32.9	13,847	9,868	71.3	3,978	28.7
1997	24,380	16,602	68.1	7,778	31.9	14,321	10,316	72.0	4,006	28.0
1998	25,867	19,058	73.7	6,810	26.3	15,159	11,862	78.2	3,298	21.8
1999	27,544	20,450	74.2	7,094	25.8	16,112	12,746	79.1	3,365	20.9

Table 7. Total and federally financed higher education R&D expenditures at institutions in the standard form survey population, by type of R&D: FYs 1953–2025

(Dollars in millions)

	Total					Federal				
		Basic research		Applied research and experimental development			Basic research		Applied research and experimental development	
Fiscal year	All R&D expenditures	Amount	Percent	Amount	Percent	All federal R&D expenditures	Amount	Percent	Amount	Percent
2000	30,084	22,547	74.9	7,537	25.1	17,548	13,936	79.4	3,611	20.6
2001	32,801	24,392	74.4	8,409	25.6	19,227	15,038	78.2	4,188	21.8
2002	36,383	27,363	75.2	9,019	24.8	21,856	17,262	79.0	4,593	21.0
2003	40,077	30,105	75.1	9,973	24.9	24,753	19,627	79.3	5,126	20.7
2004	43,238	31,957	73.9	11,281	26.1	27,627	21,353	77.3	6,274	22.7
2005	45,774	34,353	75.0	11,421	25.0	29,187	22,885	78.4	6,302	21.6
2006	47,759	36,082	75.5	11,677	24.5	30,132	23,697	78.6	6,434	21.4
2007	49,495	37,726	76.2	11,769	23.8	30,430	24,001	78.9	6,429	21.1
2008	51,872	39,322	75.8	12,550	24.2	31,272	24,430	78.1	6,842	21.9
2009	54,863	40,913	74.6	13,950	25.4	32,576	25,025	76.8	7,551	23.2
Total non-S&E and S&E[a]										
2010	61,287	40,894	66.7	20,393	33.3	37,478	25,668	68.5	11,809	31.5
2011	65,274	43,423	66.5	21,851	33.5	40,768	27,679	67.9	13,089	32.1
2012	65,730	43,110	65.6	22,620	34.4	40,142	26,871	66.9	13,270	33.1
2013	66,979	43,942	65.6	23,036	34.4	39,445	26,417	67.0	13,029	33.0
2014	67,161	43,540	64.8	23,621	35.2	37,961	25,209	66.4	12,753	33.6
2015	68,521	44,331	64.7	24,190	35.3	37,846	25,236	66.7	12,611	33.3
2016	71,737	45,653	63.6	26,084	36.4	38,788	25,307	65.2	13,481	34.8
2017	75,150	47,156	62.7	27,995	37.3	40,248	26,028	64.7	14,219	35.3
2018	79,027	49,804	63.0	29,223	37.0	41,860	27,056	64.6	14,804	35.4
2019	83,490	52,635	63.0	30,856	37.0	44,460	28,787	64.7	15,673	35.3
2020	86,309	54,287	62.9	32,022	37.1	46,109	29,449	63.9	16,660	36.1
2021	89,706	56,153	62.6	33,553	37.4	49,121	31,299	63.7	17,822	36.3
2022	97,685	61,369	62.8	36,315	37.2	53,975	34,465	63.9	19,510	36.1
2023	108,703	67,788	62.4	40,915	37.6	59,610	37,662	63.2	21,948	36.8
2024	117,502	73,064	62.2	44,438	37.8	64,622	40,664	62.9	23,958	37.1
2025	124,273	76,514	61.6	47,760	38.4	67,362	41,401	61.5	25,961	38.5

na = not applicable; separate data for federally financed basic research, applied research, and experimental development were not collected for these years.

S&E = science and engineering.

[a] Totals for FYs 1953–2009 represent R&D expenditures in S&E fields only. Beginning in FY 2010, totals and type of R&D data include R&D expenditures in S&E fields and non-S&E fields.

[b] FY 1978 data are estimated based on data collected from doctorate-granting institutions only.

Note(s):
Type of R&D estimation procedure was revised for FY 1998 and later years; hence, these data are not directly comparable to data for FY 1997 and earlier years. Prior to FY 2010, R&D expenditures by type of R&D were based on percentage estimates of basic research provided by universities and colleges. Beginning in FY 2010, institutions were asked for dollar amounts of federally funded and nonfederally funded R&D expenditures for basic research, applied research, and experimental development. Because of rounding, detail may not add to total.

Source(s):
National Center for Science and Engineering Statistics, Higher Education Research and Development Survey.