

TABLE 16

Higher education R&D expenditures, by highest degree granted, institutional control, and type of cost: FYs 2010–19

(Dollars in thousands)

Type of cost, highest degree granted, and institutional control	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
All institutions										
All R&D	61,286,610	65,274,393	65,729,007	67,013,138	67,199,090	68,549,882	71,736,098	75,133,630	79,014,076	83,496,348
Direct costs	46,159,649	49,311,567	49,897,854	51,089,463	51,564,673	52,612,168	55,256,526	57,897,397	60,772,296	64,331,413
Salaries, wages, and fringe benefits	25,929,799	27,860,610	28,339,070	28,802,181	29,118,462	29,894,812	31,441,635	33,238,860	34,683,542	36,575,206
Software	105,970	116,422	103,456	107,685	96,522	117,011	113,489	109,598	121,377	136,307
Noncapitalized software	88,456	98,438	93,250	95,652	84,279	93,207	95,136	98,611	110,753	120,932
Capitalized software	17,514	17,984	10,206	12,033	12,243	23,804	18,353	10,987	10,624	15,375
Capitalized equipment	2,148,421	2,256,025	2,040,534	2,254,429	2,036,393	2,119,860	2,169,161	2,191,021	2,144,436	2,433,525
Passed through to subrecipients	4,956,929	5,436,850	5,531,421	5,689,087	5,702,916	5,633,830	5,694,423	5,909,986	6,311,278	6,708,143
Other direct costs	13,018,530	13,641,660	13,883,373	14,236,081	14,610,380	14,846,655	15,837,818	16,447,932	17,511,663	18,478,232
Indirect costs	15,126,961	15,962,826	15,831,153	15,923,675	15,634,417	15,937,714	16,479,572	17,236,233	18,241,780	19,164,935
Recovered	10,465,893	11,352,339	11,221,624	11,220,177	10,873,879	11,101,007	11,449,146	12,049,894	12,743,171	13,639,179
Unrecovered	4,661,068	4,610,487	4,609,529	4,703,498	4,760,538	4,836,707	5,030,426	5,186,339	5,498,609	5,525,756
Doctorate										
All R&D	60,266,691	64,064,133	64,700,201	66,217,717	66,447,854	67,890,206	70,686,403	74,426,798	78,347,201	82,812,253
Direct costs	45,266,156	48,282,499	49,022,847	50,398,617	50,915,499	52,041,028	54,338,570	57,275,139	60,192,716	63,739,339
Salaries, wages, and fringe benefits	25,494,721	27,357,645	27,906,910	28,462,160	28,785,382	29,604,060	31,091,822	32,920,793	34,374,754	36,270,662
Software	98,119	110,285	95,627	102,523	91,341	111,645	108,602	107,174	119,486	134,693
Noncapitalized software	80,940	92,808	86,115	90,658	79,637	88,079	90,540	96,568	109,003	119,471
Capitalized software	17,179	17,477	9,512	11,865	11,704	23,566	18,062	10,606	10,483	15,222
Capitalized equipment	2,086,956	2,192,296	1,995,345	2,219,549	2,011,006	2,095,638	2,038,958	2,163,760	2,120,644	2,412,184
Passed through to subrecipients	4,901,412	5,371,178	5,469,627	5,647,933	5,663,439	5,609,210	5,656,845	5,878,660	6,281,316	6,679,732
Other direct costs	12,684,948	13,251,095	13,555,338	13,966,452	14,364,331	14,620,475	15,442,343	16,204,752	17,296,516	18,242,068
Indirect costs	15,000,535	15,781,634	15,677,354	15,819,100	15,532,355	15,849,178	16,347,833	17,151,659	18,154,485	19,072,914
Recovered	10,382,463	11,236,113	11,125,166	11,147,825	10,808,902	11,041,072	11,380,475	11,994,069	12,683,635	13,579,261
Unrecovered	4,618,072	4,545,521	4,552,188	4,671,275	4,723,453	4,808,106	4,967,358	5,157,590	5,470,850	5,493,653
Nondoctorate										
All R&D	1,019,919	1,210,260	1,028,806	795,421	751,236	659,676	1,049,695	706,832	666,875	684,095
Direct costs	893,493	1,029,068	875,007	690,846	649,174	571,140	917,956	622,258	579,580	592,074
Salaries, wages, and fringe benefits	435,078	502,965	432,160	340,021	333,080	290,752	349,813	318,067	308,788	304,544
Software	7,851	6,137	7,829	5,162	5,181	5,366	4,887	2,424	1,891	1,614
Noncapitalized software	7,516	5,630	7,135	4,994	4,642	5,128	4,596	2,043	1,750	1,461
Capitalized software	335	507	694	168	539	238	291	381	141	153
Capitalized equipment	61,465	63,729	45,189	34,880	25,387	24,222	130,203	27,261	23,792	21,341
Passed through to subrecipients	55,517	65,672	61,794	41,154	39,477	24,620	37,578	31,326	29,962	28,411
Other direct costs	333,582	390,565	328,035	269,629	246,049	226,180	395,475	243,180	215,147	236,164

TABLE 16

Higher education R&D expenditures, by highest degree granted, institutional control, and type of cost: FYs 2010–19

(Dollars in thousands)

Type of cost, highest degree granted, and institutional control	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Indirect costs	126,426	181,192	153,799	104,575	102,062	88,536	131,739	84,574	87,295	92,021
Recovered	83,430	116,226	96,458	72,352	64,977	59,935	68,671	55,825	59,536	59,918
Unrecovered	42,996	64,966	57,341	32,223	37,085	28,601	63,068	28,749	27,759	32,103
Public										
All R&D	41,266,626	43,915,960	44,162,595	44,849,697	44,678,272	45,412,330	47,075,274	49,244,179	51,878,872	54,645,841
Direct costs	31,705,979	33,922,562	34,339,324	35,005,995	35,020,267	35,641,244	36,944,375	38,658,378	40,638,845	42,850,674
Salaries, wages, and fringe benefits	18,317,189	19,636,095	19,949,722	20,231,506	20,439,977	20,800,559	21,733,838	22,910,231	23,759,391	25,066,278
Software	82,340	96,499	83,509	85,149	74,464	92,881	89,385	81,589	93,851	103,412
Noncapitalized software	69,454	80,693	74,897	76,518	65,044	74,448	74,083	73,840	85,080	92,511
Capitalized software	12,886	15,806	8,612	8,631	9,420	18,433	15,302	7,749	8,771	10,901
Capitalized equipment	1,457,694	1,555,049	1,476,328	1,655,640	1,468,645	1,508,981	1,578,186	1,551,278	1,518,117	1,745,660
Passed through to subrecipients	3,065,688	3,418,705	3,502,384	3,608,137	3,558,954	3,541,678	3,517,694	3,656,993	3,912,836	4,141,323
Other direct costs	8,783,068	9,216,214	9,327,381	9,425,563	9,478,227	9,697,145	10,025,272	10,458,287	11,354,650	11,794,001
Indirect costs	9,560,647	9,993,398	9,823,271	9,843,702	9,658,005	9,771,086	10,130,899	10,585,801	11,240,027	11,795,167
Recovered	6,175,654	6,585,483	6,554,816	6,539,581	6,339,721	6,409,899	6,619,094	6,974,844	7,362,021	7,945,424
Unrecovered	3,384,993	3,407,915	3,268,455	3,304,121	3,318,284	3,361,187	3,511,805	3,610,957	3,878,006	3,849,743
Private										
All R&D	20,019,984	21,358,433	21,566,412	22,163,441	22,520,818	23,137,552	24,660,824	25,889,451	27,135,204	28,850,507
Direct costs	14,453,670	15,389,005	15,558,530	16,083,468	16,544,406	16,970,924	18,312,151	19,239,019	20,133,451	21,480,739
Salaries, wages, and fringe benefits	7,612,610	8,224,515	8,389,348	8,570,675	8,678,485	9,094,253	9,707,797	10,328,629	10,924,151	11,508,928
Software	23,630	19,923	19,947	22,536	22,058	24,130	24,104	28,009	27,526	32,895
Noncapitalized software	19,002	17,745	18,353	19,134	19,235	18,759	21,053	24,771	25,673	28,421
Capitalized software	4,628	2,178	1,594	3,402	2,823	5,371	3,051	3,238	1,853	4,474
Capitalized equipment	690,727	700,976	564,206	598,789	567,748	610,879	590,975	639,743	626,319	687,865
Passed through to subrecipients	1,891,241	2,018,145	2,029,037	2,080,950	2,143,962	2,092,152	2,176,729	2,252,993	2,398,442	2,566,820
Other direct costs	4,235,462	4,425,446	4,555,992	4,810,518	5,132,153	5,149,510	5,812,546	5,989,645	6,157,013	6,684,231
Indirect costs	5,566,314	5,969,428	6,007,882	6,079,973	5,976,412	6,166,628	6,348,673	6,650,432	7,001,753	7,369,768
Recovered	4,290,239	4,766,856	4,666,808	4,680,596	4,534,158	4,691,108	4,830,052	5,075,050	5,381,150	5,693,755
Unrecovered	1,276,075	1,202,572	1,341,074	1,399,377	1,442,254	1,475,520	1,518,621	1,575,382	1,620,603	1,676,013

Source(s):

National Center for Science and Engineering Statistics, Higher Education Research and Development Survey.