



APPENDIX TABLE 4-10

U.S. R&D expenditures, by state, performing sector, and funding sector: 2015

(Millions of current dollars)

State	All R&D	R&D rank	Per-former:	Federal	FFRDCs		Business				Higher education ^a						Other nonprofit insti-tutions		State, in-ternal ^b		GDP	GDP rank	R&D intensity ^c	
			Source of funds:	Federal	Total	Federal	Non-federal ^d	Total	Own	Paid by others		Total	Federal	Other govern-ment	Busi-ness	Higher ed-ucation	Non-profit	Other	Federal ^f	Total			Per-cent	Rank
										Non-federal ^e	Fed-eral													
U.S. total ^g	495,144	na		35,673	18,649	18,287	362	355,821	289,892	38,939	26,990	64,653	33,546	3,772	3,842	17,334	4,139	2,020	6,189	610	18,120,700	na	2.73	na
States total ^g	468,866	na		30,006	18,458	18,097	361	345,317	288,492	29,932	23,931	68,513	37,763	3,808	3,997	16,682	4,236	2,027	5,987	585	17,925,143	na	2.62	na
Alabama	4,195	26		1,698	0	0	0	1,561	875	135	551	903	530	48	61	227	24	13	27	6	199,980	27	2.10	24
Alaska	333	49		91	0	0	0	66	32	26	8	163	92	12	6	50	2	1	4	9	53,384	47	0.62	47
Arizona	7,011	20		327	24	21	3	5,515	4,450	604	461	1,100	487	47	30	356	52	128	37	8	291,448	22	2.41	18
Arkansas	624	41		18	0	0	0	302	271	26	6	293	99	64	13	91	2	25	10	1	118,677	35	0.53	49
California	125,056	1		2,365	5,155	5,042	114	107,982	95,020	6,004	6,957	8,657	4,714	381	554	1,657	794	557	842	55	2,491,619	1	5.02	4
Colorado	6,697	22		419	545	505	40	4,362	3,665	236	461	1,274	930	40	82	124	83	14	88	8	313,329	19	2.14	21
Connecticut	9,918	14		250	0	0	0	8,533	6,441	299	1,793	1,091	625	18	54	311	70	14	21	22	256,306	23	3.87	8
Delaware	2,887	30		4	0	0	0	2,681	2,049	621	11	192	126	11	6	42	4	3	8	2	68,864	42	4.19	7
District of Columbia	3,567	28		2,367	9	9	0	299	198	18	83	559	305	5	11	159	67	13	332	2	121,119	34	2.95	12
Florida	9,456	15		1,066	0	0	0	5,816	3,788	655	1,373	2,389	1,120	191	122	818	99	40	140	45	883,861	4	1.07	36
Georgia	6,877	21		190	0	0	0	4,614	3,821	610	183	2,046	1,211	53	107	570	82	23	25	2	501,522	9	1.37	33
Hawaii	609	42		75	0	0	0	186	123	47	17	332	214	14	7	86	10	2	14	2	80,599	39	0.76	43



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			Source of funds:	Federal	Total	Federal	Non-federal ^d	Total	Own	Paid by others		Total	Federal	Other govern-ment	Busi-ness	Higher ed-ucation	Non-profit	Other	Federal ^f			Total	Per-cent	Rank
										Non-federal ^e	Fed-eral													
Idaho	2,226	34		41	476	457	19	1,554	1,304	244	6	147	81	30	3	28	2	3	1	6	65,460	43	3.40	9
Illinois	16,502	8		285	1,039	1,008	31	12,710	11,467	1,056	187	2,391	1,379	55	130	610	189	28	75	2	772,182	5	2.14	22
Indiana	7,663	17		85	0	0	0	6,252	5,346	830	76	1,324	542	81	70	502	104	24	2	1	333,363	16	2.30	20
Iowa	3,407	29		56	46	45	1	2,539	1,916	D	D	759	344	54	36	292	30	3	4	4	175,809	30	1.94	28
Kansas	2,716	31		22	0	0	0	2,126	1,515	588	23	562	234	65	51	179	30	4	4	1	151,845	31	1.79	29
Kentucky	1,853	35		26	0	0	0	1,292	763	58	471	533	227	59	16	177	23	31	1	1	191,897	28	0.97	38
Louisiana	1,124	38		50	0	0	0	400	325	35	40	663	266	92	36	215	36	18	1	9	238,075	24	0.47	50
Maine	508	45		13	0	0	0	298	259	13	26	108	51	22	3	28	3	1	87	3	57,332	44	0.89	41
Maryland	20,385	5		10,462	702	702	0	5,136	2,825	517	1,793	3,742	2,943	65	91	451	176	16	342	1	366,242	15	5.57	3
Massachusetts	28,665	2		632	1,374	1,369	5	21,484	17,719	2,899	865	3,674	2,142	52	266	753	300	160	1,490	11	488,100	11	5.87	2
Michigan	19,891	7		372	0	0	0	17,136	15,620	1,233	283	2,335	1,190	48	93	867	97	39	48	1	470,611	13	4.23	6
Minnesota	8,053	16		61	0	0	0	6,820	6,290	252	278	929	494	59	26	295	13	41	240	3	326,833	17	2.46	17
Mississippi	943	40		317	0	0	0	216	186	17	14	408	194	92	22	90	8	2	2	*	105,871	37	0.89	40
Missouri	7,426	18		236	0	0	0	6,078	3,737	D	D	1,074	611	7	71	276	98	10	30	7	292,718	21	2.54	16
Montana	459	47		45	0	0	0	225	200	15	10	182	107	11	3	52	3	5	4	2	45,845	49	1.00	37
Nebraska	1,087	39		38	0	0	0	578	539	29	10	464	184	11	23	209	27	9	7	1	113,458	36	0.96	39
Nevada	566	43		26	0	0	0	381	329	29	23	158	96	16	3	34	2	7	1	*	141,070	33	0.40	51



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			Source of funds:	Federal	Total	Federal	Non-federal ^d	Total	Own	Paid by others		Total	Federal	Other govern-ment	Busi-ness	Higher ed-ucation	Non-profit	Other	Federal ^f	Total			Per-cent	Rank
										Non-federal ^e	Fed-eral													
New Hampshire	2,333	32		39	0	0	0	1,932	817	283	832	358	241	5	15	77	14	5	4	*	74,269	40	3.14	11
New Jersey	15,865	9		541	81	81	1	14,113	11,627	2,260	226	1,106	588	93	38	294	74	20	21	2	564,360	8	2.81	13
New Mexico	6,078	24		657	4,499	4,427	72	502	254	61	188	391	254	26	9	80	12	10	26	3	93,230	38	6.52	1
New York	22,401	4		224	587	573	14	15,329	11,897	1,767	1,666	5,700	3,026	233	433	1,385	461	162	317	243	1,445,611	3	1.55	30
North Carolina	11,823	12		306	0	0	0	8,572	6,428	1,972	172	2,815	1,600	148	337	540	152	38	116	14	499,741	10	2.37	19
North Dakota	460	46		28	0	0	0	211	191	15	5	218	73	60	14	64	2	5	1	1	55,927	45	0.82	42
Ohio	12,233	11		797	0	0	0	9,044	6,149	1,868	1,027	2,153	1,269	122	185	436	101	39	238	1	607,326	7	2.01	27
Oklahoma	1,311	37		199	0	0	0	661	605	36	21	420	183	62	29	125	11	9	31	*	188,011	29	0.70	45
Oregon	7,208	19		86	0	0	0	6,357	6,103	139	115	720	503	55	30	73	43	15	28	18	216,522	25	3.33	10
Pennsylvania	14,839	10		663	131	131	0	10,354	9,022	1,168	164	3,357	2,179	80	197	603	198	100	327	7	708,402	6	2.09	25
Rhode Island	1,427	36		165	0	0	0	751	679	23	50	453	210	11	6	205	17	5	57	*	55,650	46	2.56	15
South Carolina	2,257	33		143	122	122	0	1,289	1,129	82	78	665	283	34	43	276	21	8	16	22	201,831	26	1.12	35
South Dakota	271	50		14	0	0	0	139	115	12	11	103	50	19	3	22	7	2	14	*	47,073	48	0.58	48
Tennessee	4,369	25		204	1,333	1,305	28	1,570	1,345	179	46	1,076	626	31	52	315	39	12	185	1	316,659	18	1.38	32
Texas	23,668	3		1,076	13	11	1	17,350	14,790	1,446	1,114	5,083	2,016	814	352	1,278	373	249	144	3	1,611,189	2	1.47	31
Utah	4,174	27		147	0	0	0	3,274	2,685	149	441	733	419	45	79	150	35	6	1	18	149,099	32	2.80	14



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			Source of funds:	Federal	Total	Federal	Non-federal ^d	Total	Own	Paid by others		Total	Federal	Other govern-ment	Busi-ness	Higher ed-ucation	Non-profit			Other	Federal ^f	Total	Per-cent	Rank	
										Non-federal ^e	Fed-eral														
Vermont	374	48		6	0	0	0	247	204	26	17	120	88	0.24	2	23	5	1	0.00	1	30,300	51	1.23	34	
Virginia	10,107	13		2,733	1,372	1,348	24	4,486	2,719	343	1,424	1,411	738	74	62	473	53	12	90	15	481,721	12	2.10	23	
Washington	20,038	6		149	951	942	9	16,940	16,313	415	212	1,549	1,058	80	57	191	114	50	439	10	446,417	14	4.49	5	
West Virginia	546	44		133	0	0	0	201	158	19	23	199	87	14	13	69	4	12	11	2	73,384	41	0.74	44	
Wisconsin	6,132	23		52	0	0	0	4,676	4,052	538	85	1,374	684	95	40	451	71	32	23	7	301,587	20	2.03	26	
Wyoming	253	51		6	0	0	0	177	137	35	5	57	49	3	2	2	1	0	11	2	39,415	50	0.64	46	
U.S. undistributed ^h	14,090	na		3,586	0	0	0	10,504	8,188	D	0	0	0	0	0	0	0	0	0	0	0	na	na	na	na
Puerto Rico ⁱ	137	na		6	0	0	0	NA	NA	NA	NA	127	88	4	4	29	1	1	*	4	103,100	na	NA	na	
Other ^j	263	na		235	0	0	0	0	0	0	0	28	26	*	*	*	*	1	*	na	na	na	na	na	

* = < \$0.5 million; D = data withheld to avoid disclosing operations of individual companies; na = not applicable; NA = not available.

FFRDC = federally funded research and development center; GDP = gross domestic product; HE = higher education.

^a State-level higher education R&D data have not been adjusted to eliminate the double counting of all pass-through funding. At the national level, funds passed through to educational subrecipients accounted for 8.2% of total R&D expenditures reported by universities and colleges in FY 2015.

^b Internal performers include state agency and department employees and also services performed by others in support of an internal R&D project.

^c R&D intensity is the ratio of total R&D performed in a state to its state GDP.

^d Nonfederal sources of R&D expenditures reported by FFRDCs in FY 2015 included state and local governments (\$18 million), business (\$209 million), nonprofit organizations (\$28 million), and all other sources (\$106 million).

^e R&D paid for by nonfederal sources includes funding from other companies located inside (\$15 billion) or outside (\$16 billion) the United States, U.S. state government agencies (\$127 million), foreign government agencies and laboratories (\$572 million), other organizations located inside (\$489 million) or outside (\$54 million) the United States.

^f Other sources of support for nonprofit institutions were unavailable by state. In 2015, total nonprofit performance is estimated at \$19.7 billion. Business provided an estimated \$1.6 billion to the nonprofit sector, and nonprofit institutions provided an estimated \$12.0 billion.

^g States totals differ from U.S. totals for several reasons: (1) some R&D expenditures cannot be allocated to 1 of 50 states or the District of Columbia; (2) nonfederal sources of other nonprofit R&D expenditures could not be allocated by state; (3) state-level higher education data have not been adjusted to eliminate double counting of funds passed through from one academic institution to another; and (4) state-level R&D data are not converted from fiscal years to calendar years.



^h Reported data that could not be assigned to 1 of the 50 states or the District of Columbia.

ⁱ Data on business R&D performance in Puerto Rico are not collected.

^j Includes R&D expenditures reported for outlying areas (Guam, Virgin Islands, American Samoa) and offices abroad but excluding Puerto Rico.

Note(s)

Business R&D data refer to calendar years; the data for the other R&D performers refer to fiscal years but are used here as approximations to calendar-year data.

Source(s)

National Science Foundation, National Center for Science and Engineering Statistics, National Patterns of R&D Resources (annual series). State GDP data are from the U.S. Bureau of Economic Analysis, <http://www.bea.gov/regional/index.htm>, accessed 17 June 2017.

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