

Appendix table 4-11

U.S. R&D expenditures, by state, performing sector, and source of funds: 2010

(Millions of current dollars)

State	Performer:		Federal				FFRDCs		Business				U&C ^a				Other nonprofit institutions	State, internal ^b	GDP	R&D intensity ^c		
	Funding source:	All R&D	Federal	Total Federal	Non-federal ^d	Total	Own	Non-federal ^e	Federal	Total	Federal	Other government	Bus-ness	U&C	Non-profit	Federal ^f				Total	GDP	rank
U.S. total ^g	406,708	na	31,217	17,722	NA	NA	278,977	221,706	23,072	34,199	60,235	36,561	3,782	3,139	11,990	4,764	7,000	NA	14,526,500	na	2.80	na
States total ^g	376,952	na	29,779	18,031	17,578	453	261,016	205,336	18,583	24,717	61,028	37,358	3,849	3,200	11,845	4,776	7,099	0	14,416,604	na	2.61	na
Alabama	3,738	26	1,410	0	0	0	1,449	628	72	749	847	541	42	33	197	34	32	NA	170,219	26	2.20	23
Alaska	347	49	89	0	0	0	74	D	D	D	181	111	10	6	49	5	4	NA	47,713	46	0.73	46
Arizona	5,473	21	372	57	53	4	4,054	2,841	246	967	945	495	61	32	274	83	45	NA	249,824	20	2.19	24
Arkansas	590	43	26	0	0	0	276	245	19	12	268	126	61	11	55	14	21	NA	102,235	35	0.58	49
California	81,005	1	2,747	4,293	4,155	138	64,914	53,327	3,987	7,600	7,833	4,766	378	492	1,168	1,028	1,217	NA	1,877,568	1	4.31	5
Colorado	6,164	20	283	547	505	42	3,899	3,270	219	410	1,180	893	46	65	102	75	256	NA	253,101	19	2.44	20
Connecticut	7,435	16	23	0	0	0	6,498	5,482	429	587	889	620	20	29	147	73	25	NA	221,347	24	3.36	12
Delaware	2,327	31	6	0	0	0	2,144	D	D	D	169	116	7	6	36	4	9	NA	64,010	40	3.64	9
District of Columbia	3,568	27	2,551	6	6	0	235	84	28	123	470	308	12	11	84	55	305	NA	103,546	34	3.45	11
Florida	7,952	15	709	0	0	0	5,127	3,045	313	1,770	1,995	1,103	194	80	520	97	121	NA	736,065	4	1.08	37
Georgia	5,451	22	154	0	0	0	3,644	2,931	283	429	1,627	985	53	85	411	94	25	NA	403,230	11	1.35	35
Hawaii	688	42	97	0	0	0	257	173	47	37	318	209	24	24	45	16	16	NA	65,599	39	1.05	39
Idaho	1,779	34	50	478	464	15	1,120	810	296	13	126	76	23	3	22	3	4	NA	56,038	43	3.17	13
Illinois	15,820	8	204	1,053	1,006	47	12,221	11,500	483	237	2,224	1,427	56	80	504	156	117	NA	646,794	5	2.45	19
Indiana	6,339	18	165	0	0	0	4,985	4,219	580	186	1,186	530	68	57	404	127	2	NA	267,277	17	2.37	21
Iowa	2,765	29	64	31	30	1	1,950	1,516	D	D	707	398	51	31	196	30	14	NA	140,945	30	1.96	28
Kansas	2,002	33	21	0	0	0	1,492	1,039	406	47	483	232	53	34	141	23	6	NA	126,074	32	1.59	31
Kentucky	1,498	35	24	0	0	0	889	820	48	21	575	283	55	19	187	31	10	NA	159,350	28	0.94	43
Louisiana	1,200	37	53	0	0	0	428	340	39	49	714	333	109	39	193	40	5	NA	232,394	23	0.52	50
Maine	488	45	18	0	0	0	251	228	9	14	138	66	22	4	38	7	81	NA	50,674	44	0.96	41
Maryland	18,429	4	9,896	694	694	0	4,384	2,538	600	1,247	3,139	2,423	63	97	380	176	315	NA	293,349	15	6.28	2
Massachusetts	20,657	2	835	1,252	1,248	4	14,020	11,139	1,804	1,077	2,750	2,010	24	185	240	291	1,801	NA	377,846	12	5.47	3
Michigan	14,702	9	480	0	0	0	12,144	10,750	1,017	377	2,031	1,178	62	61	626	105	46	NA	368,371	13	3.99	6
Minnesota	7,393	17	61	0	0	0	6,246	5,677	255	314	832	443	70	30	195	94	254	NA	270,792	16	2.73	16
Mississippi	852	41	164	0	0	0	243	170	13	61	444	268	76	11	77	11	1	NA	95,480	36	0.89	44
Missouri	9,253	13	26	0	0	0	8,106	D	D	1,087	684	28	55	223	97	33	33	NA	243,386	22	3.80	7
Montana	390	48	29	0	0	0	145	123	15	7	208	140	8	1	47	12	8	NA	36,540	48	1.07	38
Nebraska	935	40	34	0	0	0	527	491	22	15	368	195	16	16	103	39	6	NA	90,072	37	1.04	40
Nevada	939	39	50	0	0	0	709	646	22	41	174	119	9	2	40	4	6	NA	126,188	31	0.74	45
New Hampshire	2,159	32	26	0	0	0	1,818	841	D	D	311	204	7	19	56	25	4	NA	61,636	42	3.50	10
New Jersey	17,876	5	766	84	84	*	15,925	13,916	1,750	259	1,076	602	103	41	249	81	26	NA	480,446	7	3.72	8
New Mexico	6,225	19	550	4,663	4,577	86	546	231	48	267	423	290	25	14	81	13	43	NA	77,095	38	8.07	1
New York	17,141	6	260	536	515	20	10,954	8,126	694	2,134	4,951	2,971	324	264	953	439	440	NA	1,128,823	3	1.52	33
North Carolina	8,746	14	404	0	0	0	5,749	4,688	849	211	2,465	1,481	148	323	346	166	128	NA	424,562	9	2.06	27
North Dakota	468	46	27	0	0	0	236	211	18	7	204	105	44	12	37	5	1	NA	35,654	50	1.31	36
Ohio	10,048	12	898	0	0	0	6,857	5,134	561	1,162	2,052	1,250	165	166	364	107	241	NA	466,930	8	2.15	26
Oklahoma	1,029	38	112	0	0	0	478	422	37	19	401	176	54	29	124	18	39	NA	147,587	29	0.70	48
Oregon	5,250	24	110	0	0	0	4,396	4,188	144	64	696	503	41	23	75	54	48	NA	185,211	25	2.83	15

Appendix table 4-11

U.S. R&D expenditures, by state, performing sector, and source of funds: 2010

(Millions of current dollars)

State	Performer: Funding source:	Federal		FFRDCs			Business				U&C ^a				Other nonprofit institutions Federal ^f	State, internal ^b Total	GDP	R&D intensity ^c					
		All R&D	R&D rank	Total	Federal	Non-federal ^d	Total	Own	Non-federal ^e	Federal	Total	Federal	Bus-ness	U&C				Non-profit	GDP	rank	Percent	Rank	
Pennsylvania	13,074	10	292	99	97	3	9,246	8,412	538	296	3,128	2,187	144	157	479	162	308	NA	558,918	6	2.34	22	
Rhode Island	1,439	36	384	0	0	0	531	448	42	40	429	192	8	6	199	23	95	NA	48,840	45	2.95	14	
South Carolina	2,384	30	220	127	127	0	1,316	944	264	109	660	346	8	42	238	27	61	NA	160,374	27	1.49	34	
South Dakota	270	50	10	0	0	0	120	99	13	8	131	84	19	2	20	5	8	NA	38,215	47	0.71	47	
Tennessee	3,955	25	138	1,538	1,495	44	1,244	1,113	88	43	938	642	65	31	158	43	96	NA	256,194	18	1.54	32	
Texas	19,504	3	488	15	15	*	14,384	11,850	1,193	1,342	4,416	2,238	623	262	869	425	200	NA	1,222,904	2	1.59	30	
Utah	3,197	28	567	0	0	0	2,066	1,419	D	D	562	340	30	27	137	28	2	NA	119,231	33	2.68	17	
Vermont	452	47	6	0	0	0	313	278	16	19	133	101	*	2	23	6	*	NA	25,264	51	1.79	29	
Virginia	10,838	11	3,406	1,440	1,415	24	4,655	2,340	292	2,023	1,199	726	116	46	241	70	138	NA	419,365	10	2.58	18	
Washington	16,685	7	264	1,117	1,092	25	13,545	13,022	319	204	1,358	960	82	102	162	52	401	NA	339,829	14	4.91	4	
West Virginia	584	44	137	0	0	0	240	191	12	38	195	110	14	5	63	3	12	NA	61,934	41	0.94	42	
Wisconsin	5,346	23	65	0	0	0	3,927	3,399	449	79	1,336	723	124	26	265	197	18	NA	245,720	21	2.18	25	
Wyoming	104	51	8	0	0	0	39	32	4	3	55	45	4	2	3	1	2	NA	35,845	49	0.29	51	
U.S. undistributed ^h	17,960	na	0	0	0	0	17,960	12,534	3,063	2,363	0	0	0	0	0	0	0	0	0	na	na	na	na
Puerto Rico ⁱ	NA	na	6	13	13	*	NA	NA	NA	NA	125	84	2	5	31	3	*	NA	96,260	na	NA	na	na
Other ^j	227	na	189	0	0	0	0	0	0	0	38	33	2	*	*	2	*	na	na	na	na	na	na

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

FFRDC = federally funded R&D center; GDP = gross domestic product; U&C = universities and colleges.

^a State-level university R&D data have not been adjusted to eliminate double counting of funds passed through from one academic institution to another. At the national level, funds passed through to educational subrecipients account for 4.5% of the total R&D expenditures reported by U&C in FY 2010.^b Internal performers include state agency and department employees, as well as services performed by others in support of an internal R&D project. Data from the National Science Foundation's (NSF's) FYs 2010–11 survey of state R&D spending not available at the time of this report. In FY 2009, these state R&D expenditures totaled \$318 million.^c R&D intensity is the ratio of total R&D performed in a state to its GDP.^d Nonfederal sources of R&D expenditures reported by FFRDCs in FY 2010 included state and local governments (\$53 million), business (\$167 million), nonprofit organizations (\$44 million), and all other sources (\$190 million).^e R&D paid for by nonfederal sources includes funding from other companies located inside (\$11.0 billion) or outside (\$11.0 billion) the United States, foreign government agencies and laboratories (\$37 million), other organizations located inside (\$779 million) or outside (\$74 million) the United States.^f Other sources of support for nonprofit institutions were unavailable by state. In 2010, the total of nonprofit performance is estimated at \$18.3 billion. Business provided an estimated \$1.3 billion to the nonprofit sector, and nonprofit institutions provided an estimated \$10.0 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 U&C 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) and offices abroad, but excluding Puerto Rico.

NOTE: Industry R&D data refer to calendar years; other R&D data refer to fiscal years but are used here as approximations to calendar year data.

SOURCES: National Science Foundation, National Center for Science and Engineering Statistics (NSF/NCSES), National Patterns of R&D Resources, Business Research and Development and Innovation Survey, Higher Education R&D Survey (annual series), Survey of Federal Funds for R&D (annual series), Federally Funded R&D Centers R&D Survey (annual series), R&D Funding and Performance by Nonprofit Organizations (FYs 1996–97). All NSF/NCSES reports are available at <http://www.nsf.gov/statistics/>. State GDP data are from the U.S. Bureau of Economic Analysis, <http://www.bea.gov>, accessed 27 November 2012.