

TABLE 34-B

Companies with domestic R&D paid for and performed by the company, by industry, company size, and state (N-Z): 2019

(Millions of U.S. dollars and number)

Industry and company size	NAICS code	Companies, U.S. total ^a (number)	United States	Nebraska	Nevada	New Hampshire	New Jersey	New Mexico	New York	North Carolina	North Dakota	Ohio	Oklahoma	Oregon	Pennsylvania	Rhode Island	South Carolina	South Dakota	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin	Wyoming	Undistributed ^c								
All industries	21-23, 31-33, 42-81	26,270	428,968	735	829	1,036	16,648	391	17,968	9,188	340	7,087	956	7,606	13,353	664	1,527	170	1,381	20,916	2,463	218	4,276	35,823	219	i	5,679	670	916							
Manufacturing industries	31-33	14,410	248,109	243	513	734	12,680	220	7,690	6,239	155	5,824	573	5,973	10,177	612	1,088	134	981	9,015	1,037	128	1,480	5,709	169	i	3,829	641	379							
Food	311	860	3,937	54	2 e	* e	241	* e	38	56	4	163	14	16	64	1 e	4	4	27	27	6	4	133	45	* e	92	0-175	e	0-175							
Beverage and tobacco products	312	350	971	* e	* e	* e	1 e	* e	260	86	* e	2	1 i	2 e	2 e	* e	* e	* e	1 e	148	* e	1 i	90	49	* e	1 i	0-22	e	0-22							
Textile, apparel, and leather products	313-16	210	873	* e	1	13	2 e	* e	32	50	* e	82	2	21	6	1 e	64	* e	3 e	5 e	5	* e	9	19	* e	12	0-29		0-29							
Wood products	321	80	180	* e	* e	* e	* e	*	* e	10	13	3	0-22	3	3 i	3	* e	* e	6	4 i	1 i	* i	11	10	* e	14		* e	0-22							
Paper	322	90	1,064	1	* e	2	8	* e	7	38	0	20	* e	1	24	4	274	* e	29	16	*	2	93	15	* e	324	0		3							
Printing and related support activities	323	200	420	i	1 e	1 e	1 e	5 e	1 i	13	49	i	* e	28	i	1 e	4	21	i	1	3	i	* e	32	i	13	1 e	1 e	3 e	7	i	* e	32	i	* e	8
Petroleum and coal products	324	70	1,203	* e	* e	* e	341	* e	1 e	2	0	6	0-62	2	11	* e	9	* e	* e	599-682	2	0	1	* e	* e	2	* e	0-130								
Chemicals	325	2,260	87,288	49	115	92	9,825	16	3,793	2,892	4	2,421	150	89	7,327	63	96	37	285	1,639	251	50	i	221	1,439	128	i	591	5	55						
Basic chemicals	3251	240	2,198	9	0-40	2	167	* e	24	75	* e	263	11	13	187	2	27	35	238	173	2	0	130	18	13	35	* e	0-40								
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	170	1,092	* e	* e	* e	6	0	26	6	0	237	*	3	116	2	16	0	1 e	240	* e	* e	4	15	10	9	0		0-45							
Pesticide, fertilizer, and other agricultural chemicals	3253	150	1,501	11	61-105	51	207	* e	1	176-327	*	2	95	1	97	15	* e	*	1	99	3	* e	4	3	* e	1 e	0		0-45							
Pharmaceuticals and medicines	3254	1,000	78,652	27	11	35	9,146	15	3,502	2,460	4	532	39	59	6,792	37	40	e	1	34	1,036	237	43	i	78	1,398	105	i	424	5	5					
Soap, cleaning compound, and toilet preparation	3256	260	2,596	2	* e	* e	232	i	* e	211	i	27	0	1,206	* e	1 e	7	i	* e	3	* e	4	38	7	i	6	1 e	1 e	1 e	113	0	7				
Paint, coating, adhesive, and other chemicals	3255, 3259	460	1,249	* e	* e	4	66	* e	29	0-150	0	181	4	12	128	6	11	*	8	52	2	* e	4	2	i	* e	9	* e	0-45							
Plastics and rubber products	326	770	2,770	2 e	3 e	12	37	* e	106	73	1 e	332	44	6	114	8	51	2	38	99	4	i	* e	25	17	8	100	i	0-89	e	0-89					
Nonmetallic mineral products	327	160	1,473	i	* e	1	* e	23	* e	1,030	i	15	* e	17	0-25	e	3	30	* e	8	* e	4	3	1	* i	2	4	* e	9	* e	0-25					
Primary metals	331	200	649	* e	* e	8	2	* e	6	13	* e	38	3	17	146	3	14	*	4	22	2	i	1 i	2	2	i	2	25	0-32	e	0-32					
Fabricated metal products	332	1,690	2,632	12	7	16	235	1 e	78	42	1 e	224	13	e	24	65	4	68	1 e	40	186	18	1 e	19	126	2 e	170	1		49						
Machinery	333	2,080	13,930	48	15	51	193	i	3 i	593	325	126	415	172	439	282	37	180	14	i	60	773	45	18	66	120	5 e	721	10	43						
Agricultural implement	33311	180	1,913	41	*	0	* e	* e	1 e	49	49	91	24	3	2 e	0	2	3	4	7	2	i	0	1 e	3	1 i	26	* e	4							
Semiconductor machinery	333242	60	3,854	0	0	* i	29	0	58	i	2 e	0	1 e	0	0-437	22	0	0	0	* i	275	i	2	1	0	* e	0	0	0	1						
Engine, turbine, and power transmission equipment	3336	100	1,096	* e	4	2	2	* e	350	13	* e	14	4	i	1	8	* e	159	* e	* e	6	1	i	0	35	14	* e	232	* e	*						

TABLE 34-B

Companies with domestic R&D paid for and performed by the company, by industry, company size, and state (N-Z): 2019

(Millions of U.S. dollars and number)

Industry and company size	NAICS code	Companies, U.S. total ^a (number)	United States	Nebraska	Nevada	New Hampshire	New Jersey	New Mexico	New York	North Carolina	North Dakota	Ohio	Oklahoma	Oregon	Pennsylvania	Rhode Island	South Carolina	South Dakota	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin	Wyoming	Undistributed ^c	
Other machinery	other 333	1,760	7,067	7 e	11	50	163 i	3 i	184	262	76	309	144	0-437	251	37	19	11 i	56	485	40	17	30	103	4 e	463	10	39	
Computer and electronic products	334	2,160	75,570	43	40	446	813	186	982	1,842	1 e	652	57	4,634	972	77	111	62	118	4,217	259	34	323	1,172	6	195	403-623	13-211	
Communications equipment	3342	290	11,495	8	14	119	360	24 i	297	745	* e	113	13	38	319 i	6	17	1	47	772	81	1	195	207	2	26	0	4	
Semiconductor and other electronic components	3344	550	31,975	i 6	3 e	150	166 i	152	204	646 i	0	91	2 e	4,207	255	37	33	40	11	2,129	74	16	16	123	2	45	299-623	0-198	
Navigational, measuring, electromedical, and control instruments	3345	1,120	10,912	27	14 i	152	270	8	274	270	1 e	400	39	246	310	28	60	22	55	461	75	15	97	373	1 e	109	1 e	10	
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	220	3,117	* e	8 i	36	38 i	0	119 i	30 i	0	92 i	2	18 i	118	* e	17 i	* e	41	62 i	27 i	5 i	25 i	84	0	56 i	0	1	
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	190	3,400	7	3	93	122	3	92	125 i	0	59	25	94 i	62	24	1	* e	1	153	14	*	37	70	0	5	* e	1	
Other measuring and controlling device	other 3345	720	4,395	20	2 e	22	110	4	63	114	1 e	249 i	12	133	130	3 e	42	21	13	247 i	35	10	35	219	1 e	48	* e	8	
Other computer and electronic products	other 334	220	21,188	1 i	9	26	16	2	207	182	* e	49 i	3	143	88	7	2	* i	5	855	29	2	15	469	1 e	15 i	0-125	0-125	
Electrical equipment, appliances, and components	335	880	4,886	1 e	2 e	10	141	1 i	107	238	* i	95	23	73	327	11	54	3	36	136	4	3 e	36	49	4	528	1 i	0-36	
Transportation equipment	336	970	31,505	30	34	38	89	9	332	270	5	923	34	399	254	1 e	137	7	142	808	154	5	362	2,257	12 i	398	4	0-34	
Motor vehicles, bodies, trailers, and parts	3361-63	530	20,883	11	3	19	25	2	128	211	4	0-379	24	368	92	* e	101	0-8	117	156	44	* e	0-261	136	1 e	196	4	0-34	
Aerospace products and parts	3364	290	8,900	19 i	31	19	59	7	180	44	* i	545	10	30	114	* i	9	*	17	631	109 i	5	102 i	2,119	11 i	15	* e	0-34	
Aircraft, aircraft engine, and aircraft parts	336411-13	180	8,341	19 i	31	19	59	7	180	43	* i	539	10	30	112	* i	9	*	16	584	109 i	5	95 i	2,115	11 i	15	* e	0-34	
Guided missile, space vehicle, and related parts	336414-15, 336419	110 i	559	*	*	*	*	*	1	1	0	6	0	0	1	0	*	0	2	47	*	0	7	4	0	* e	0	*	
Military armored vehicle, tank, and tank component	336992	30	25	0	0	0	0	0	0	1	0	* i	0	0	0	0	5 e	0	0	0	0	0	0	0	0	0	0	0	0-8
Other transportation	other 336	140	1,697	1	* e	1	6	0	23	14	*	0-379	* e	1 e	49 i	* e	21	0-8	8	20	* e	0	0-261	2 e	* e	187	0	0-34	
Furniture and related products	337	190	407	* e	* e	* i	3	* e	2	29	* e	4 i	* e	14	21	2	* e	* i	12	5	22	* e	12	2	1	15	* e	14	
Miscellaneous	339	1,280	18,352	1 e	293	45	721 i	2 e	310	207	1 e	399	3-66	226	506	397 i	14	2 e	141 i	240-306	260	7 i	73	376	1 e	601	0-72 i	0-72	
Medical equipment and supplies	3391	770	15,812	1 e	4 e	31	661 i	1 e	164	185	* e	367	4	69	446	24	10	1	133 i	241	223	* e	63	267	* e	555	0-25 i	0-25	

TABLE 34-B

Companies with domestic R&D paid for and performed by the company, by industry, company size, and state (N-Z): 2019

(Millions of U.S. dollars and number)

Industry and company size	NAICS code	Companies, U.S. total ^a (number)	United States	Nebraska	Nevada	New Hampshire	New Jersey	New Mexico	New York	North Carolina	North Dakota	Ohio	Oklahoma	Oregon	Pennsylvania	Rhode Island	South Carolina	South Dakota	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin	Wyoming	Undistributed ^c	
Other miscellaneous manufacturing	3399	520	2,540	1 e	290	14	59	1 e	147	22	* e	32	0-62 e	158	61	373 i	4 e	1 e	8	0-65	36	7 i	10	109	1 e	46	0-65 e	0-65	
Nonmanufacturing industries	21-23, 42-81	11,880	180,858	492	316 i	302	3,968	171	10,278	2,949	185	1,263	383	1,633	3,177	51	439	36	400	11,901 i	1,427	90	2,796	30,114	50	1,850	29 e	537	
Mining, quarrying, oil and gas extraction, and support activities	21	150	2,535	* e	63	* e	0-25 e	8 e	7	0-25 e	19	4 e	141	0-25 e	19	* e	1 e	0-6 e	10	1,867	10 i	* e	3 e	0-25 e	5 e	8	13 e	21	
Utilities	22	40	237	0	0	0	0-50	0	11	0-50	9	23	*	0-50	7	0	0	*	0	44	5	0	0	0-50	7	0-50	1	0-50	
Wholesale trade	42	1,500	1,104	4 e	5 e	4 e	57	2 e	73 e	22 e	3 e	30 e	6 e	13 e	29 e	0-19 e	16	5	14 e	93 e	8 e	1 e	15 e	0-106 e	2 e	25 e	1 e	0-105	
Electronic shopping and electronic auctions	454111-12	60	3,088-15,775	0-35 i	0-127 i	0-20 i	0-271 i	1 i	0-402 i	0-116	1 i	0-109 i	1 i	0-308 i	0-138 i	0-19 i	0-46 i	0-6 i	4 i	0-713 i	47 i	0-14 e	0-819 i	0-8,532 i	1 i	0-96 i	0-6 e	0-105 i	
Transportation and warehousing	48-49	130	9,504 i	13	0-26 e	0-20 e	17	1 e	787 i	14	6 i	38	2 e	19	824 i	* e	2 e	* e	86	56	4	* e	6	748	* e	9	* e	15	
Information	51	3,000	109,062	395	64 e	177	2,137	79	6,262	1,793	103	489	106	854	1,249	13 i	287	12	96 e	2,089	1,003	27	893	20,080	9	954	8	39	
Publishing	511	1,040	32,447	34	18	100	196	16	820	1,059	96	291	13 e	401	327	6	15	4	20	697	338	12	232	14,710	3	689	3	20	
Newspaper, periodical, book, and directory publishers	5111	40	61	* e	* e	*	*	* e	6	1	* e	1	* e	2	3	* e	*	* e	*	2	* e	* e	1 i	1	* e	*	* e	*	
Software publishers	5112	1,000	32,386	34	18	100	195	16	814	1,058	96	290	13 e	399	323	6	15	4	19	696	338	12	232	14,709	3	689	3	20	
Telecommunications	517	210	3,700	1 e	1 e	6	1,486	1 e	463	43	1 e	6	2 e	15	7	0-3	4	1 e	3	56	8	1 e	59	292	0-3 e	18	0-4 e	0-20	
Data processing, hosting, and related services	518	1,440	30,154	304	43 e	68	278	0-64	1,442	591	6 e	147	30	309	364	6 i	203	5 e	54 e	1,044	423	14	401	1,147	5	224	3 e	0-20	
Other information	other 51	330	42,761	56	2 e	3	178	0-64	3,537	100	1 e	44	61	130	551	0-3 e	65	1	19	292	234	1 e	200	3,931	0-3 e	22	0-4	0-20	
Finance and insurance	52	220	8,890	0-35	26	0-20	396	* e	789	146	* e	188	1 e	0-233	339	0-19	0-46	1	0-78	410	125	0-14	169	0-233	* e	523 i	* e	3	
Real estate and rental and leasing	53	50	1,371	8	*	* e	*	* e	24	* e	* e	7	* e	0-303	1	* e	* e	* e	* e	2 i	1	*	1	0-303	* e	* e	* i	0-105	
Lessors of nonfinancial intangible assets (except copyrighted works)	533	20	45	1 i	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1 i	0	0	0	0	0	0	0	*	i
Other real estate and rental and leasing	other 53	30	1,326	7	*	* e	*	* e	24	* e	* e	7	* e	0-303	1	* e	* e	* e	* e	1	1	*	1	0-303	* e	* e	* i	0-105	
Professional, scientific, and technical services	54	5,540	29,131	35	30	102	1,041	31	1,868	840	41	347	105	425 i	521	18	68	15	88	6,555 i	194	50	868	756	19	182	3 e	357	
Architectural, engineering, and related services	5413	1,160	2,288	8	7	6	35	8	117	30	16	51	9	83	76	4 i	7 e	7	26	367 i	24	4	87	70	1 e	30	1	63	
Computer systems design and related services	5415	2,880	18,395	9 e	17	43	216 e	16	1,468	597	20	202	12 e	312 i	191	6 e	35	4	25 e	5,755 i	79	45	553	464 i	6 e	111	1 e	268	

TABLE 34-B

Companies with domestic R&D paid for and performed by the company, by industry, company size, and state (N-Z): 2019

(Millions of U.S. dollars and number)

Industry and company size	NAICS code	Companies, U.S. total ^a (number)	United States	Nebraska	Nevada	New Hampshire	New Jersey	New Mexico	New York	North Carolina	North Dakota	Ohio	Oklahoma	Oregon	Pennsylvania	Rhode Island	South Carolina	South Dakota	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin	Wyoming	Undistributed ^c	
Scientific research and development services	5417	850	3,265	9	1	50	101	4 e	111	144	4	42	4 e	11	149	8 i	7	3	4 e	80	45	1 i	63	151	10	9 e	1 i	10	
Research and development in biotechnology	541711	210	1,083	8	* e	24	4	* e	38	68	0	2	* e	5	56	0	*	2	*	9	20 i	1 i	21	46	*	* e	0	2	
Research and development in the physical, engineering, and life sciences (except biotechnology)	541712	630	2,155	2 e	1	25	96	4 e	73	77	4	37	4 e	6	93	7 i	7	2	3 e	64	24	* i	42	105	10	9 e	1 i	7	
Research and development in the social sciences and humanities	541720	20	27	0	0	*	1	0	0	0	0	2	0	0	0	* i	0	0	0	7	0	0	*	*	0	0	0	1	
Other professional, scientific, and technical services	other 54	670	5,182	9	5	3	688	3 i	172	69	1	52	79	19	105	1 e	18	* e	33	353	46	1	165	70	1	31	* e	15	
Health care services	621-23	560	1,928	6 e	5 e	2 e	53	6 e	60 e	22 e	0-7 e	33 e	7 e	17 e	55 e	3 e	23	0-6 e	28 e	77 e	10 e	0-14 e	27 e	0-86	0-11 e	57	0-6 e	0-86	
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	670	1,322 - 14,012	0-35	0-127 e	0-20 e	0-271	43	0-402	0-116	0-7	0-109	15	0-308	0-138	0-19	0-46 e	0-6 e	0-78	0-713	22	0-14 i	0-819	0-8,532	0-11	0-96	0-6 e	0-105	
All companies (number of domestic employees)	-	26,270	428,968	735	829	1,036	16,648	391	17,968	9,188	340	7,087	956	7,606	13,353	664	1,527	170	1,381	20,916	2,463	218	4,276	35,823	219 i	5,679	670	916	
Small companies																													
10-19 ^b	-	4,990	4,432	15 e	26 e	47	288	13 e	212 e	94 e	4 e	111 e	29 e	36 e	142 e	24 i	27 e	5 e	41 e	231 e	33 e	6 e	138 e	133	7 e	65 e	3 e	27	
20-49	-	7,220	10,040	32 e	51	35 e	368	18 e	412 e	213 e	19	266 e	40 e	114	403	22 e	54 e	8 e	70 e	458 e	138	14 e	270 e	409	18	148 e	4 e	68	
Medium companies																													
50-99	-	4,720	11,492	28	29 e	49	351	23 e	370	329	20	235	48 e	116	492	18	52 e	12	49 e	638	112	20	188	292	14 e	162	14 e	112	
100-249	-	4,350	16,520	45	43	75	471	47 i	525	310	19	367	65	180	602	36	80	13	85	974	254	13	204	672	9 e	446	5	158	
Large companies																													
250-499	-	2,050	15,356	50	24	41	677	43	840	265	2 e	280	31	135	455	9	54	11	70	584	129	28	185	570	5	170	0-129 e	0-129	
500-999	-	1,180	21,549	95	226	136	578	20	1,038	1,132	22	352	33	117	307	26	88	6 e	119	1,160	213	12	349	578	11	321	4 e	45-104	
1,000-4,999	-	1,230	64,475	159	120	341	1,046	19	1,259	1,965	101	1,281	222	1,117	1,656	216	327	97	161	2,104	724	14	596	3,681	20	820	16	350	
5,000-9,999	-	230	44,728	51	102	80	1,684 i	7	3,022	1,430	13	533	143	440	666	220 i	148	2	100	1,485	142	26	332	437 i	3	1,701	* i	0-82 i	
10,000-24,999	-	220	74,385	58	79	93	4,500 i	15	4,338	1,737	1	2,003	209	694	3,307 i	43	288	5	320	4,911	415	39 i	229	1,261	116 i	1,208	3	0-49	
25,000 or more	-	130	165,991	203	127 i	139	6,686	186	5,952	1,712	140	1,658	138	4,657	5,323	49	408	11	366	8,369 i	304	45	1,784 i	27,790	15 i	637	487-625	0-159	

* = amount < \$500,000. e = estimated; > 50% of the estimate is modeled—see Technical Notes. i = > 50% of the estimate is a combination of imputation and reweighting to account for nonresponse.

NAICS = 2012 North American Industry Classification System.

^a Beginning in survey year 2018, these statistics include an adjustment to the weight to account for unit nonresponse; beginning in survey year 2019, these company count estimates reflect a change in rounding methodology.

^b The Business Enterprise Research and Development Survey does not include companies with fewer than 10 domestic employees.

^c Includes data reported that were not allocated to a specific state by multi-establishment companies. For single-establishment companies, data reported were allocated to the state in the address used to mail the survey form.

Note(s):

Detail may not add to total because of rounding. Industry classification is based on the dominant business code for domestic R&D performance, where available. For companies that did not report business codes, the classification used for sampling was assigned. Beginning in survey year 2018, statistics are representative of companies located in the United States that performed or funded \$50,000 or more of R&D. This change has affected the comparability of these estimates with estimates published for years prior to 2018. For a given estimate in this table, if the conditions are satisfied for both the "i" and "e" flags, the e flag is assigned because the imputation rate may be found in the corresponding table of imputation rates. An estimate range may be displayed in place of a single estimate to avoid disclosing operations of individual companies.

Source(s):

National Center for Science and Engineering Statistics and Census Bureau, Business Enterprise Research and Development Survey, 2019.