

TABLE 11

Domestic R&D paid for by the company and others and performed by the company, by industry and company size: 2020

(Millions of U.S. dollars)

Industry	NAICS code	Company size (domestic employees)										
		All companies	10-19 ^a	20-49	50-99	100-249	250-499	500-999	1,000-4,999	5,000-9,999	10,000-24,999	25,000 or more
All industries	21-23, 31-33, 42-81	537,619	5,047	12,994	12,993	25,411	20,878	21,264	88,238	48,397	88,567	213,829
Manufacturing industries	31-33	308,445	1,697	6,269	7,009	13,189	10,155	12,963	47,984	33,421	66,449	109,310
Food	311	5,239	18	94	98	176	188	242	540	1,051	1,941	891 i
Beverage and tobacco products	312	1,177 i	7	8	23	18	116	16	41	349	74	524 i
Textile, apparel, and leather products	313-16	822	5	6	17	37	8	50	138	278	94 i	188
Wood products	321	187	0	8	13	11	11	13	38	89	5	0
Paper	322	928	0	5	6	33	12	6	182	67	338	279
Printing and related support activities	323	283	*	9	14	65 i	18	14	58	33	72 i	0
Petroleum and coal products	324	1,311 - 1,324	8	15	119	15	14	137	71	16	2 - 330	582 - 931
Chemicals	325	101,079	892	3,107	3,084	6,928	3,894	4,599	16,445	11,672	32,063	18,396
Basic chemicals	3251	2,694	4	174	167	229	97	163	1,160	301	381	18
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	1,234	1	26	40	77	67	91	159	0	772	0
Pesticide, fertilizer, and other agricultural chemicals	3253	1,060 - 1,066	17	17	31	27	11	5	516	0	432 - 445	0
Pharmaceuticals and medicines	3254	91,776	837	2,777	2,755	6,367	3,552	4,202	13,721	11,182	28,333	18,049
Soap, cleaning compound, and toilet preparation	3256	2,665	12	46	25	158	45	58	463 i	188	1,470	200 i
Paint, coating, adhesive, and other chemicals	3255, 3259	1,643 - 1,649	21	66	65	70	122	79	426	0	661 - 674	129 i
Plastics and rubber products	326	2,634	5	111	122	245	177	355	1,033	174	181	232
Nonmetallic mineral products	327	1,717 i	1	0 - 134 i	31	117	0 - 205	107	172	288	0	660 - 1,005 i
Primary metals	331	815	0	107	52	64	28	36	285	223	21	0
Fabricated metal products	332	3,396	201	421	518	702	297	298	699	145	116	0
Machinery	333	16,223	97	571	875	1,047	676	654	2,522	3,552	3,481	2,748
Agricultural implement	33311	1,769 - 1,811	1	22	0 - 698	48	0 - 583	57	141	433	0	0 - 1,112
Semiconductor machinery	333242	4,807	5	19	58	41	42	173 i	1,380	1,258	1,829	0
Engine, turbine, and power transmission equipment	3336	1,645	0	18	36	59	46	68	51 i	1,367	0	0
Other machinery	other 333	7,959 - 8,001	91	511	84 - 783	898	6 - 589	356	950	494	1,651 i	1,635 - 2,749
Computer and electronic products	334	99,535	204	1,004	1,052	1,704	3,082	3,161	14,871	9,415	15,051	49,992

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Communications equipment	3342	12,103	24	9 - 445	0 - 244	0 - 369	530	0 - 1,148	2,700	1,802	0	4,839 - 7,040
Semiconductor and other electronic components	3344	43,181	67	13 - 448	349	681	1,945	1,344	6,059	3,855	i 13,729	14,702 - 15,139
Navigational, measuring, electromedical, and control instruments	3345	18,505	26 - 115	547	460	656	497	670	3,947	1,386	504 - 601	9,719
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	2,858	12	169	176	270	180	346	1,477	0	227	0
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	10,586	15	35	96	154	122	0 - 248	183	815 - 1,071	0	8,914
Other measuring and controlling device	other 3345	5,061	0 - 89	343	i 188	232	195	76 - 325	2,288	314 - 572	276 - 375	805
Other computer and electronic products	other 334	25,747	0 - 89	0 - 354	0 - 245	0 - 369	110	0 - 1,148	2,165	2,371	720 - 819	i 18,093 - 20,382
Electrical equipment, appliances, and components	335	4,998	55	220	157	305	254	849	1,791	164	873	331
Transportation equipment	336	48,796	50	161	243	514	763	1,706	5,327	3,367	7,516	29,148
Motor vehicles, bodies, trailers, and parts	3361-63	23,121	0 - 40	43 - 52	14 - 41	227	368	889	3,434	2,360	i 4,189 - 4,851	10,857 - 11,570
Aerospace products and parts	3364	22,914	i 11 - 36	98	118	237	337	650	i 1,476	719 - 743	2,666	16,578
Aircraft, aircraft engine, and aircraft parts	336411-13	21,291	i 10	92	109	174	271	293	400	699	2,666	16,578
Guided missile, space vehicle, and related parts	336414-15, 336419	1,623	1 - 26	6	10	63	66	357	i 1,076	20 - 44	0	0
Military armored vehicle, tank, and tank component	336992	11	0 - 7	0 - 4	3	1	2	0 - 7	0	0	0	0
Other transportation	other 336	2,750	0 - 24	7 - 21	80 - 109	50	56	159 - 169	416	264 - 289	0 - 661	i 1,000 - 1,714
Furniture and related products	337	496	0	9	37	132	14	20	118	155	11	0
Miscellaneous	339	18,791 - 18,809	153	287 - 421	550	1,077	404 - 610	700	3,653	2,382	4,290 - 4,618	4,694 - 5,314
Medical equipment and supplies	3391	16,116	134	287	393	790	405	504	2,394	2,224	4,291	4,695
Other miscellaneous manufacturing	3399	2,674 - 2,692	19	0 - 134	156	287	0 - 205	197	1,259	158	i 0 - 327	0 - 619
Nonmanufacturing industries	21-23, 42-81	229,174	3,351	6,726	5,984	12,223	10,723	8,301	40,254	14,975	22,118	104,520
Mining, quarrying, oil and gas extraction, and support activities	21	1,165	6	43	93	i 48	56	i 84	i 271	0 - 568	0 - 568	0

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Utilities	22	264	3	20	0	0	0	15	54	0 - 140	0 - 140	34 - 175
Wholesale trade	42	1,058	64	269	132	300	123	107	34	3	19	9
Electronic shopping and electronic auctions	454111-12	3,840 - 19,390	3	14	2 - 581	0 - 280	105	2	0 - 568	0 - 1,049	0 - 3,512	0 - 17,731
Transportation and warehousing	48-49	4,957	0	1	81	11	1	40	2,141	9	0 - 2,676	0 - 2,676
Information	51	129,463	727	1,860	1,362	4,554	6,130	4,638	24,753	7,317	5,373	72,748
Publishing	511	35,025	472	679	570	1,178	525	786	8,610	1,791	1,267	19,147
Newspaper, periodical, book, and directory publishers	5111	60	*	1	6	*	53	0	0	0	0	0
Software publishers	5112	34,965	472	678	564	1,178	472	786	8,610	1,791	1,267	19,147
Telecommunications	517	3,425 - 3,437	0 - 200	0 - 200	52	178	106	103	89	29	0 - 200	2,684
Data processing, hosting, and related services	518	41,551	48 - 251	896	678	2,576	5,331	2,724	12,382	4,994	2,316 - 2,527	9,399
Other information	other 51	49,449 - 49,463	6	84 - 286	63	621	169	1,026	3,673	503	1,580 - 1,791	41,518
Finance and insurance	52	12,296	36	11	47	237	4 - 569	510	3,167	1,292	2,477	3,945 - 4,518
Real estate and rental and leasing	53	3,249	0 - 23	9	5	7	0 - 23	21	3,186	0	0	0
Lessors of nonfinancial intangible assets (except copyrighted works)	533	7	0	2	3	2	0	0	0	0	0	0
Other real estate and rental and leasing	other 53	3,242	0 - 23	7	3	5	0 - 23	21	3,186	0	0	0
Professional, scientific, and technical services	54	54,367	2,469	4,352	3,490	6,462	3,728	2,004	5,808	5,280	10,723	10,052
Architectural, engineering, and related services	5413	4,214	365	471	490	688	682	150	334	259	190	587
Computer systems design and related services	5415	17,935	612	1,553	895	1,228	1,149	715	2,903	25	4,017	4,838
Scientific research and development services	5417	25,600	1,393	1,980	1,736	3,952	1,171	918	1,928	3,362	6,403	2,758
Research and development in nanotechnology	541713	179	112	67	0	0	0	0	0	0	0	0
Research and development in biotechnology (except nanobiotechnology)	541714	6,191	330	454	434	429	112	59	0	0	1,615	2,758
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	18,539	944	1,454	1,267 - 1,302	2,841 - 3,524	1,025 - 1,060	858	1,279 - 1,928	3,362	4,788	0
Research and development in the social sciences and humanities	541720	691	6	5	0 - 35	0 - 681	0 - 33	0	0 - 649	0	0	0
Other professional, scientific, and technical services	other 54	6,618	100	349	370	594	726	221	642	1,634	113	1,870
Health care services	621-23	1,477	15	89	197	305	0 - 285	305	252	16	17	0 - 285

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Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71- 72, 81	1,491 - 17,041	0 - 32	58	0 - 579	23 - 303	0 - 579	576	i	24 - 593	11 - 1,062	0 - 3,512	0 - 16,303

* = amount < \$500,000; i = more than 50% of the estimate is a combination of imputation and reweighting to account for nonresponse.

NAICS = 2017 North American Industry Classification System.

^a The Business Enterprise Research and Development Survey does not include companies with fewer than 10 domestic employees.**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. Statistics are representative of companies located in the United States that performed or funded \$50,000 or more of R&D and are not comparable with estimates published for years prior to 2018. 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, 2020.