

TABLE 15

Domestic R&D paid for by the company and others and performed by the company, by industry, company size, and domestic R&D program size: 2021

(Millions of U.S. dollars)

Industry	NAICS code	R&D program size					
		All companies	Less than \$1 million	\$1 million–\$9.999 million	\$10 million–\$49.999 million	\$50 million–\$99.999 million	\$100 million or more
All industries	21–23, 31–33, 42–81	602,499	5,575	33,829	47,434	28,847	486,814
Manufacturing industries	31–33	326,060	2,963	14,972	25,850	18,339	263,936
Food	311	5,266	202	659	902	751	2,752
Beverage and tobacco products	312	1,247	25	124	67	179	851
Textile, apparel, and leather products	313–16	829	65	200	288	79	197
Wood products	321	444	26	269	149	0	0
Paper	322	1,139	21	119	163	147	688
Printing and related support activities	323	204	31	92	82	0	0
Petroleum and coal products	324	957	19	70	174	72	622
Chemicals	325	109,490	344	2,802	8,975	6,128	91,240
Basic chemicals	3251	2,713	54	233	860	634	931
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	1,389	0 - 34	170	209	50 - 84	928
Pesticide, fertilizer, and other agricultural chemicals	3253	1,157	16	75	113	0	953
Pharmaceuticals and medicines	3254	100,220	98	1,941	7,354	5,295	85,532
Soap, cleaning compound, and toilet preparations	3256	2,740	78	153	176	0	2,334
Paint, coating, adhesive, and other chemicals	3255, 3259	1,271	61 - 100	231	264	114 - 151	562
Plastics and rubber products	326	3,144	206	690	1,063	171	1,014
Nonmetallic mineral products	327	1,533	96	211	137	109	981
Primary metals	331	912	63	184	297	0	368
Fabricated metal products	332	4,291	511	1,870	949	628	334
Machinery	333	17,730	387	2,123	2,412	1,646	11,162
Agricultural implement	33311	1,867	0 - 53	119	164	50 - 103	1,483
Semiconductor machinery	333242	5,349	7	50	212	369	4,711
Engine, turbine, and power transmission equipment	3336	1,374	11	82	188	225	868
Other machinery	other 333	9,140	315 - 370	1,872	1,848	948 - 1,003	4,100
Computer and electronic products	334	101,063	382	2,306	3,608	3,622	91,145
Communications equipment	3342	12,557	59	277	412	722	11,087
Semiconductor and other electronic components	3344	47,396	87	832	1,251	1,408	43,819
Navigational, measuring, electromedical, and control instruments	3345	13,644	212	835	1,559	1,110	9,927
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	3,087	39	228	552	338	1,930
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	5,301	46	93	248	342	4,573
Other measuring and controlling devices	other 3345	5,256	127	514	759	431	3,424
Other computer and electronic products	other 334	27,465	25	362	386	381	26,312

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Electrical equipment, appliances, and components	335	5,494	95	577	1,225	754	2,842
Transportation equipment	336	50,760	198	1,054	2,722	2,323	44,463
Motor vehicles, bodies, trailers, and parts	3361–63	26,391	94	444	1,635	1,358	22,860
Aerospace products and parts	3364	21,468	i 47	408	914	729	19,371
Aircraft, aircraft engine, and aircraft parts	336411–13	19,845	i 42	381	586	359 - 463	18,371 - 18,478
Guided missile, space vehicle, and related parts	336414–15, 336419	1,623	4	27	328	265 - 369	893 - 1,000
Military armored vehicle, tank, and tank components	336992	21 - 25	2 - 6	19	0	0	0
Other transportation	other 336	2,875 - 2,880	50 - 56	184	173	236	2,232
Furniture and related products	337	426	40	145	241	0	0
Miscellaneous	339	21,133	253	1,476	2,395	1,731	15,278
Medical equipment and supplies	3391	18,438	112	923	1,778	1,293	14,331
Other miscellaneous manufacturing	3399	2,695	141	553	617	438	947
Nonmanufacturing industries	21–23, 42–81	276,439	2,612	18,858	21,583	10,508	222,878
Mining, quarrying, oil and gas extraction, and support activities	21	1,260 - 1,334	20	321	i 155 - 233	270	i 492
Utilities	22	168 - 17,997	3	5 - 1,399	10 - 935	50 - 134	i 100 - 17,928
Wholesale trade	42	1,745 - 1,855	i 424	1,271	i 49 - 160	i 0	0
Electronic shopping and electronic auctions	454111–12	5,936 - 24,040	i 4 - 405	44	10 - 935	50 - 134	4,419 - 23,494
Transportation and warehousing	48–49	7,208	0 - 59	97	537	50 - 109	i 6,467
Information	51	147,855	512	5,218	9,329	4,475	128,320
Publishing	511	39,152	265	1,914	2,891	1,384	32,698
Newspaper, periodical, book, and directory publishers	5111	103	9	38	r 56	i 0	0
Software publishers	5112	39,049	256	1,876	2,835	1,384	32,698
Telecommunications	517	3,835	14	182	390	75	i 3,175
Data processing, hosting, and related services	518	45,192	222	2,786	5,357	2,572	34,254
Other information	other 51	59,676	11	336	692	444	58,193
Finance and insurance	52	20,947	10	739	1,134	809	18,256
Real estate and rental and leasing	53	2,096	0 - 60	43	10 - 70	0	1,985
Lessors of nonfinancial intangible assets (except copyrighted works)	533	5 - 8	0 - 2	6	0	0	0

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Other real estate and rental and leasing	other 53	2,088 - 2,091	0 - 60	37	10 - 70	0	1,985
Professional, scientific, and technical services	54	66,496	1,187	9,478	9,032	3,889	42,909
Architectural, engineering, and related services	5413	4,560	252	1,655	1,756	234	663
Computer systems design and related services	5415	20,409	626	3,824	2,329	1,320	12,309
Scientific research and development services	5417	34,142	146	2,723	3,503	2,049	25,721
Research and development in nanotechnology	541713	228	10	148	70	0	0
Research and development in biotechnology (except nanobiotechnology)	541714	9,039	25	674	785	847	6,708
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	24,312	108	1,869	2,573	1,202	18,561
Research and development in the social sciences and humanities	541720	563	3	32	76	0	452
Other professional, scientific, and technical services	other 54	7,385	162	1,276	1,444	286	4,216
Health care services	621–23	2,060 - 2,138	50 - 132	239	348	663	758
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	2,564 - 3,199	4 - 405	10 - 1,404	45 - 971	171	100 - 2,965
All companies (number of domestic employees)	–	602,499	5,575	33,829	47,434	28,847	486,814
Small companies							
10–19 ^a	–	5,477	1,301	3,487	506	50 - 85	100 - 135
20–49	–	15,061	1,781	9,188	3,769	116 - 159	162 - 205
Medium companies							
50–99	–	14,540	1,119	5,911	6,504	1,006	0
100–249	–	24,023	869	7,306	9,433	4,984	1,431
Large companies							
250–499	–	23,932	266	3,366	7,555	4,039	8,707
500–999	–	27,432	126	2,159	6,181	5,902	13,065
1,000–4,999	–	94,615	101	2,001	9,259	7,521	75,734
5,000–9,999	–	62,817	11	171	2,460	2,292	57,882
10,000–24,999	–	104,607	2	177	1,172	2,217	101,039
25,000 or more	–	229,995	*	64	594	682	228,655

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

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. R&D program size classifications are based on R&D performance. 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, 2021.