

TABLE 15

## Domestic R&amp;D paid for by the company and others and performed by the company, by industry, company size, and domestic R&amp;D program size: 2022

(Millions of U.S. dollars)

Industry and company size	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	691,547	5,822	34,401	54,390	31,904	565,029
Manufacturing industries	31–33	372,459	2,919	14,204	27,767	20,371	307,199
Food	311	7,143	175	847	1,960	809	3,351
Beverage and tobacco products	312	767	39	146	79	345	157
Textile, apparel, and leather products	313–16	635	44	143	299	150	0
Wood products	321	259	16	79	164	0	0
Paper	322	1,005	13	103	178	159	552
Printing and related support activities	323	165	26	59	80	0	0
Petroleum and coal products	324	860	10	D	178	D	D
Chemicals	325	125,728	389	2,539	9,800	7,808	105,193
Basic chemicals	3251	2,860	75	321	978	532	954
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	1,493	42	220	337	0	893
Pesticide, fertilizer, and other agricultural chemicals	3253	1,193	13	62	163	0	956
Pharmaceuticals and medicines	3254	116,073	126	1,484	7,939	7,102	99,422
Soap, cleaning compound, and toilet preparations	3256	2,886	67	204	183	76	2,356
Paint, coating, adhesive, and other chemicals	3255, 3259	1,223	65	248	199	98	613
Plastics and rubber products	326	3,470	155	697	998	415	1,205
Nonmetallic mineral products	327	1,464	70	142	161	77	1,014
Primary metals	331	1,120	70	199	311	128	410
Fabricated metal products	332	3,526	451	1,397	627	523	528
Machinery	333	19,464	427	2,166	2,324	1,528	13,018
Agricultural implement	33311	2,287	D	147	166	D	1,881
Semiconductor machinery	333242	5,438	6	42	182	317	4,892
Engine, turbine, and power transmission equipment	3336	3,026	D	137	176	D	2,645
Other machinery	other 333	8,713	D	1,841	1,800	D	3,601
Computer and electronic products	334	104,718	473	1,950	4,835	3,117	94,343
Communications equipment	3342	11,665	69	289	567	757	9,984
Semiconductor and other electronic components	3344	49,330	84	469	2,345	1,180	45,252
Navigational, measuring, electromedical, and control instruments	3345	12,777	215	894	1,529	773	9,365
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	4,578	16	318	502	349	3,393
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	4,146	D	108	315	D	3,633
Other measuring and controlling devices	other 3345	4,053	D	469	712	D	2,338
Other computer and electronic products	other 334	30,946	105	297	394	407	29,743

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Electrical equipment, appliances, and components	335	7,086	59	908	1,237	1,032	3,851
Transportation equipment	336	71,259	206	1,156	2,104	2,380	65,413
Motor vehicles, bodies, trailers, and parts	3361–63	32,881	107	558	1,268	1,373	29,574
Aerospace products and parts	3364	35,356	47	324	677	785	33,522
Aircraft, aircraft engine, and aircraft parts	336411–13	24,571	i 40	287	597	483	23,164
Guided missile, space vehicle, and related parts	336414–15, 336419	10,785	8	37	80	i 302	10,358
Military armored vehicle, tank, and tank components	336992	30	D	18	D	0	0
Other transportation	other 336	2,992	D	256	D	221	2,316
Furniture and related products	337	410	39	119	186	65	0
Miscellaneous	339	23,382	258	D	2,246	D	D
Medical equipment and supplies	3391	20,394	133	1,041	1,645	1,534	16,042
Other miscellaneous manufacturing	3399	2,989	125	D	602	D	D
Nonmanufacturing industries	21–23, 42–81	319,088	2,903	20,197	26,623	11,534	257,831
Mining, quarrying, oil and gas extraction, and support activities	21	D	17	327	i 341	i D	D
Utilities	22	D	3	D	D	D	231
Wholesale trade	42	D	350	1,277	D	0	0
Electronic shopping and electronic auctions	454111–12	D	D	88	D	D	D
Transportation and warehousing	48–49	9,395	7	70	393	0	8,925
Information	51	182,340	458	6,061	11,499	5,460	158,861
Publishing	511	50,367	223	2,464	3,203	1,168	43,310
Newspaper, periodical, book, and directory publishers	5111	72	10	6	55	0	0
Software publishers	5112	50,295	212	2,457	3,148	1,168	43,310
Telecommunications	517	3,690	73	i 156	572	85	2,803
Data processing, hosting, and related services	518	49,407	109	3,143	6,997	3,769	35,389
Other information	other 51	78,876	53	298	727	438	77,359
Finance and insurance	52	17,222	9	1,751	r 1,155	702	13,606
Real estate and rental and leasing	53	2,398	i D	32	D	0	2,145
Lessors of nonfinancial intangible assets (except copyrighted works)	533	5	i 5	i 0	0	0	0
Other real estate and rental and leasing	other 53	2,393	i D	32	D	0	2,145
Professional, scientific, and technical services	54	74,773	1,583	9,335	11,155	3,827	48,873
Architectural, engineering, and related services	5413	3,883	307	1,722	1,654	200	0
Computer systems design and related services	5415	22,534	701	3,176	3,847	1,377	13,433
Scientific research and development services	5417	39,625	i 134	3,402	3,896	1,746	30,446

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		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	
Research and development in nanotechnology	541713	282	13	185	84	0	0	
Research and development in biotechnology (except nanobiotechnology)	541714	10,226	31	828	882	612	7,873	
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	28,420	i	90	2,365	2,858	1,134	21,972
Research and development in the social sciences and humanities	541720	698	1	24	73	0	601	
Other professional, scientific, and technical services	other 54	8,730	441	r	1,035	1,757	505	4,993
Health care services	621–23	2,855	55	313	496	691	1,299	
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	3,394	397	r	D	D	D	D
All companies (number of domestic employees)	–	691,547	5,822	34,401	54,390	31,904	565,029	
Small companies								
10–19 <sup>a</sup>	–	5,277	1,608	3,105	509	55	0	
20–49	–	14,695	1,755	9,215	D	D	0	
Medium companies								
50–99	–	15,265	1,060	6,247	6,127	1,700	131	
100–249	–	27,847	958	7,395	D	D	3,127	
Large companies								
250–499	–	29,549	236	3,413	10,116	5,088	10,695	
500–999	–	31,802	128	2,380	7,898	6,211	15,186	
1,000–4,999	–	104,505	68	2,227	10,453	8,570	83,188	
5,000–9,999	–	58,709	7	164	2,156	2,831	53,550	
10,000–24,999	–	121,142	2	171	1,365	1,929	117,675	
25,000 or more	–	282,756	2	i	84	654	539	281,476

D = data withheld to avoid disclosing operations of individual companies; 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.

<sup>a</sup> 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.

**Source(s):**

National Center for Science and Engineering Statistics and Census Bureau, Business Enterprise Research and Development Survey, 2022.