

TABLE 29

Domestic R&D paid for and performed by the company, by industry, company size, and domestic R&D program size: 2016

(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	317,731	5,875	21,552	28,264	18,098	243,942
Manufacturing industries	31–33	211,660	3,602	11,901	18,071	13,054	165,032
Food	311	4,611	194	506	426	455	3,029
Beverages and tobacco products	312	987	D	66	84	D	676
Textiles, apparel, and leather products	313–16	1,156	76	408	350	322	0
Wood products	321	181	28	70	83	0	0
Paper	322	851	52	82	101	63	553
Printing and related support activities	323	219	62	78	79	0	0
Petroleum and coal products	324	367	21	149	73	124	0
Chemicals	325	64,165	502	2,438	5,722	3,913	51,589
Basic chemicals	3251	2,284	50	326	574	553	780
Resins, synthetic rubber, and artificial synthetic fibers and filaments	3252	693	49	150	179	0	314
Pesticides, fertilizers, and other agricultural chemicals	3253	1,061	14	54	D	D	D
Pharmaceuticals and medicines	3254	55,983	119	1,492	4,560	2,740	47,073
Soaps, cleaning compounds, and toilet preparations	3256	2,660	81	169	203	147	2,059
Paints, coatings, adhesives, and other chemicals	3255, 3259	1,484	187	248	D	D	D
Plastics and rubber products	326	3,584	290	542	696	231	1,826
Nonmetallic mineral products	327	1,274	61	129	215	0	870
Primary metals	331	583	78	181	213	110	0
Fabricated metal products	332	2,127	479	753	433	312	149
Machinery	333	11,699	535	1,386	1,628	1,298	6,853
Agricultural implements	33311	1,552	22	102	160	189	1,079
Semiconductor machinery	333242	3,028	8	33	136	226	2,625
Engines, turbines, and power transmission equipment	3336	1,901	27	D	156	0	D
Other machinery	other 333	5,218	477	D	1,177	883	D
Computer and electronic products	334	68,515	620	1,799	2,782	3,140	60,174
Communications equipment	3342	11,293	156	261	449	674	9,753
Semiconductors and other electronic components	3344	29,176	126	464	1,003	741	26,842
Navigational, measuring, electromedical, and control instruments	3345	10,131	257	923	889	1,069	6,993
Electromedical, electrotherapeutic, and irradiation apparatuses	334510, 334517	2,466	37	277	218	599	1,335
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	3,121	D	110	148	D	2,752
Other measuring and controlling devices	other 3345	4,544	D	536	523	D	2,906
Other computer and electronic products	other 334	17,914	81	151	440	655	16,587
Electrical equipment, appliances, and components	335	4,302	116	597	1,001	568	2,020
Transportation equipment	336	32,905	D	1,253	1,841	D	28,216
Automobiles, bodies, trailers, and parts	3361–63	19,293	47	965	1,113	1,066	16,101
Aerospace products and parts	3364	12,272	18	187	463	333	11,271
Aircraft, aircraft engines, and aircraft parts	336411–13	11,930	16	183	409	225	11,097
Guided missiles, space vehicles, and related parts	336414–15, 336419	342	2	4	54	107	174

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Military armored vehicles, tanks, and tank components	336992	3	1	3	0	0	0
Other transportation	other 336	1,337	D	99	265	D	844
Furniture and related products	337	366	64 i	98	203	0	0
Miscellaneous manufacturing	339	13,768	315 i	1,364	2,143	870	9,076
Medical equipment and supplies	3391	11,474	156 i	1,025	1,648	870	7,775
Other miscellaneous manufacturing	3399	2,294 i	159 i	339	495	0	1,301 i
Nonmanufacturing industries	21–23, 42–81	106,071	2,273 i	9,651	10,193	5,044	78,909
Mining, extraction, and support activities	21	2,897	13 i	63	57	85	2,678
Utilities	22	325	5 i	37	D	D	D
Wholesale trade	42	442 i	335 i	107 i	0	0	0
Electronic shopping and electronic auctions	454111–12	1,569 i	30 i	28 i	D	0	D
Transportation and warehousing	48–49	486	10 i	48	19	86	323
Information	51	70,075	488 i	3,708	5,128	3,515	57,235
Publishing	511	33,174	348 i	1,610 i	1,786	1,196	28,234
Newspaper, periodical, book, and directory publishers	5111	77 i	22 i	22	32	0	0
Software publishers	5112	33,098	326 i	1,588 i	1,754	1,196	28,234
Telecommunications	517	3,530 i	D	255	184	D	2,803 i
Data processing, hosting, and related services	518	11,776	117 i	1,673	2,937	1,918	5,130
Other information	other 51	21,594	D	169	221	D	21,067
Finance and insurance	52	7,237	13 i	63	522	0	6,639
Real estate and rental and leasing	53	475	13 i	5 i	45	103	309
Lessors of nonfinancial intangible assets (except copyrighted works)	533	27	D	0	D	0	0
Other real estate and rental and leasing	other 53	449	D	5 i	D	103	309
Professional, scientific, and technical services	54	20,845	1,270 i	5,024 i	3,577	876	10,097
Architectural, engineering, and related services	5413	1,816	254 i	827	581	66	88
Computer systems design and related services	5415	13,255	499 i	1,825 i	1,419	710	8,800
Scientific research and development services	5417	2,811	283 i	1,595	879	23	32
Biotechnology research and development	541711	750 i	72 i	434	218 i	0	26
Physical, engineering, and life sciences (except biotechnology) research and development	541712	2,029	206 i	1,133	661	23	6
Social sciences and humanities research and development	541720	32	4 i	28	*	0	0
Other professional, scientific, and technical services	other 54	2,962	234 i	776 i	698	77	1,177
Health care services	621–23	782	25 i	152	514 i	91	0
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	939 i	71 i	415	D	D	0
All companies (number of domestic employees)	–	317,731	5,875 i	21,552	28,264	18,098	243,942
Micro companies ^a							
5 – 9	–	1,044 i	589 i	384	71 i	0	0
Small companies							
10 – 19	–	3,887 i	D	1,892 i	616	D	0
20 – 49	–	7,473 i	1,558 i	4,820	1,095	0	0
Medium companies							

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50 – 99	–	7,728	1,049	i	3,840	2,457	382	0
100 – 249	–	11,722	893	i	4,464	4,249	1,531	585
Large companies								
250 – 499	–	11,438	302	i	2,549	4,698	1,568	2,321
500 – 999	–	13,525	127	i	1,593	4,405	3,754	3,646
1,000 – 4,999	–	53,305	62	i	1,480	7,494	7,291	36,976
5,000 – 9,999	–	35,887	D		335	1,961	D	31,569
10,000 – 24,999	–	53,384	4	i	109	834	843	51,594
25,000 or more	–	118,339	2	i	86	384	616	117,251

* = amount < \$500,000; D = data withheld to avoid disclosing operations of individual companies; i = > 50% of the estimate is a combination of imputation and reweighting to account for nonresponse.

NAICS = 2012 North American Industry Classification System.

^a Business R&D and Innovation Survey does not include companies with fewer than five 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 R&D. R&D program size classifications are based on R&D performance.

Source(s)

National Science Foundation, National Center for Science and Engineering Statistics, and U.S. Census Bureau, Business R&D and Innovation Survey, 2016.