

TABLE 3

Total R&D performance for companies with 1–4 employees, by industry and R&D program size: 2016

(Thousands of U.S. dollars)

Industry	NAICS code	All companies	Less than \$100,000	\$100,000 – \$999,999	\$1 million or more
All industries	21–23, 31–33, 42–81	4,843,494	794,450	3,011,465	1,037,579
Manufacturing industries	31–33	554,091	77,634	369,926	106,532
Food	311	s	0	s	0
Beverage and tobacco products	312	s	s	0	0
Textiles, apparel, and leather products	313–16	s	s	0	0
Wood products	321	s	s	0	0
Paper	322	0	0	0	0
Printing and related support activities	323	s	s	0	0
Petroleum and coal products	324	s	s	0	0
Chemicals	325	118,986	4,548	71,948	42,489
Basic chemicals	3251	s	s	s	0
Resins, synthetic rubber, and artificial synthetic fibers and filaments	3252	1,490	637	853	0
Pesticides, fertilizers, and other agricultural chemicals	3253	26	26	0	0
Pharmaceuticals and medicines	3254	73,993	1,309	s	37,104
Soaps, cleaning compounds, and toilet preparations	3256	s	s	0	0
Paints, coatings, adhesives, and other chemicals	3255, 3259	17,592	1,687	10,520	5,385
Plastics and rubber products	326	s	s	0	0
Nonmetallic mineral products	327	s	s	s	0
Primary metals	331	s	s	0	0
Fabricated metal products	332	26,848	13,373	s	0
Machinery	333	114,951	11,910	103,041	0
Agricultural implements	33311	s	s	s	0
Semiconductor machinery	333242	s	100	s	0
Engines, turbines, and power transmission equipment	3336	s	s	s	0
Other machinery	other 333	67,821	9,883	57,937	0
Computer and electronic products	334	134,686	14,852	91,492	28,342
Communications equipment	3342	8,518	1,336	5,492	1,690
Semiconductor and other electronic components	3344	32,457	2,806	18,575	11,077
Navigational, measuring, electromedical, and control instruments	3345	64,131	6,552	45,066	12,513
Electromedical, electrotherapeutic, and irradiation apparatuses	334510, 334517	20,745	1,200	8,904	10,641
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	4,733	434	2,427	1,872
Other measuring and controlling devices	other 3345	38,653	4,918	33,735	0
Other computer and electronic products	other 334	29,580	4,159	22,359	3,062
Electrical equipment, appliances, and components	335	23,861	D	13,449	D
Transportation equipment	336	29,131	D	s	D
Automobiles, bodies, trailers, and parts	3361–63	s	s	s	0
Aerospace products and parts	3364	D	D	0	D
Aircraft, aircraft engines, and aircraft parts	336411–13	3	3	0	0
Guided missiles, space vehicles, and related parts	336414–15, 336419	D	D	0	D
Military armored vehicles, tanks, and tank components	336992	63	63	0	0
Other transportation	other 336	D	D	s	0
Furniture and related products	337	s	s	0	0
Miscellaneous	339	76,731	17,348	31,915	27,468
Medical equipment and supplies	3391	s	5,024	s	s
Other miscellaneous manufacturing	3399	37,156	12,324	s	0
Nonmanufacturing industries	21–23, 42–81	4,289,402	716,816	2,641,539	931,048
Mining, extraction, and support activities	21	s	s	s	0

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Utilities	22	s	s	s	0
Wholesale trade	42	295,290	101,234	194,056	0
Electronic shopping and electronic auctions	454111–12	39,818	16,852	s	0
Transportation and warehousing	48–49	s	s	0	0
Information	51	239,024	37,387	182,154	19,482
Publishing	511	108,978	11,844	77,651	19,482
Newspaper, periodical, book, and directory publishers	5111	0	0	0	0
Software publishers	5112	108,978	11,844	77,651	19,482
Telecommunications	517	s	3,488	s	0
Data processing, hosting, and related services	518	63,032	8,472	54,560	0
Other information	other 51	55,222	13,583	41,639	0
Finance and insurance	52	s	s	s	0
Real estate and rental and leasing	53	s	s	0	0
Lessors of nonfinancial intangible assets (except copyrighted works)	533	s	s	0	0
Other real estate and rental and leasing	other 53	s	s	0	0
Professional, scientific, and technical services	54	3,577,353	533,821	2,133,256	910,275
Architectural, engineering, and related services	5413	381,344	88,324	291,589	1,431
Computer systems design and related services	5415	1,456,420	200,628	875,737	380,054
Scientific research and development services	5417	889,127	33,596	490,379	365,151
Biotechnology research and development	541711	337,866	9,307	179,375	149,184
Physical, engineering, and life sciences (except biotechnology) research and development	541712	529,224	21,473	293,046	214,704
Social sciences and humanities research and development	541720	22,037	2,817	17,958	1,263
Other professional, scientific, and technical services	other 54	850,462	211,273	475,550	163,639
Health care services	621–23	49,510	s	48,139	1,290
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	s	s	s	0

D = data withheld to avoid disclosing operations of individual companies; s = suppressed for reliability; standard error exceeds publication standards.

NAICS = 2012 North American Industry Classification System.

Note(s)

Detail may not add to total because of rounding. Industry classification based on sample NAICS code. 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 expense.

Source(s)

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