

TABLE 6

Total R&D performance for companies with 1–4 employees, by industry and type of cost: 2016

(Thousands of U.S. dollars)

Industry	NAICS code	Total	Salaries, wages, and fringe benefits	Equipment	Software purchases and licenses	Other
All industries	21–23, 31–33, 42–81	4,843,494	2,713,154	467,592	227,276	1,435,472
Manufacturing industries	31–33	554,091	267,299	81,796	23,489	181,507
Food	311	s	s	s	s	s
Beverages and tobacco products	312	s	0	0	s	s
Textiles, apparel, and leather products	313–16	s	s	s	0	0
Wood products	321	s	s	s	0	s
Paper	322	0	0	0	0	0
Printing and related support activities	323	s	s	s	s	s
Petroleum and coal products	324	s	s	0	0	0
Chemicals	325	118,986	50,219	11,449	2,378	54,940
Basic chemicals	3251	s	s	s	s	s
Resins, synthetic rubber, and artificial synthetic fibers and filaments	3252	1,490	960	181	18	332
Pesticides, fertilizers, and other agricultural chemicals	3253	26	25	1	0	0
Pharmaceuticals and medicines	3254	73,993	20,902	3,777	1,364	47,950
Soaps, cleaning compounds, and toilet preparations	3256	s	s	s	0	s
Paints, coatings, adhesives, and other chemicals	3255, 3259	17,592	10,495	2,345	496	4,256
Plastics and rubber products	326	s	s	s	0	s
Nonmetallic mineral products	327	s	s	s	0	s
Primary metals	331	s	s	s	0	s
Fabricated metal products	332	26,848	15,349	s	s	s
Machinery	333	114,951	63,660	14,459	s	30,022
Agricultural implements	33311	s	s	s	s	s
Semiconductor machinery	333242	s	s	s	s	s
Engines, turbines, and power transmission equipment	3336	s	s	s	s	s
Other machinery	other 333	67,821	36,599	4,398	s	s
Computer and electronic products	334	134,686	68,224	19,200	6,465	40,796
Communications equipment	3342	8,518	4,628	1,282	347	2,262
Semiconductors and other electronic components	3344	32,457	17,021	5,698	2,371	7,367
Navigational, measuring, electromedical, and control instruments	3345	64,131	28,679	9,884	2,490	23,078
Electromedical, electrotherapeutic, and irradiation apparatuses	334510, 334517	20,745	7,936	2,120	327	10,363
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	4,733	2,526	879	296	1,032
Other measuring and controlling devices	other 3345	38,653	18,218	6,885	1,867	11,683
Other computer and electronic products	other 334	29,580	17,896	2,337	1,257	8,090
Electrical equipment, appliances, and components	335	23,861	12,102	4,508	881	6,370
Transportation equipment	336	29,131	s	6,923	D	D
Automobiles, bodies, trailers, and parts	3361–63	s	s	s	0	s
Aerospace products and parts	3364	D	D	D	D	D
Aircraft, aircraft engines, and aircraft parts	336411–13	3	3	0	0	0

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Industry	NAICS code	Total	Salaries, wages, and fringe benefits	Equipment	Software purchases and licenses	Other
Guided missiles, space vehicles, and related parts	336414–15, 336419	D	D	D	D	D
Military armored vehicles, tanks, and tank components	336992	63	50	3	3	6
Other transportation	other 336	D	D	D	0	D
Furniture and related products	337	s	s	s	s	s
Miscellaneous	339	76,731	24,740	16,928	D	D
Medical equipment and supplies	3391	s	s	s	s	s
Other miscellaneous manufacturing	3399	37,156	12,816	7,265	D	D
Nonmanufacturing industries	21–23, 42–81	4,289,402	2,445,855	385,796	203,787	1,253,964
Mining, extraction, and support activities	21	s	s	s	s	s
Utilities	22	s	s	s	s	s
Wholesale trade	42	295,290	141,129	52,086	10,203	91,873
Electronic shopping and electronic auctions	454111–12	39,818	14,182	s	1,791	19,749
Transportation and warehousing	48–49	s	s	s	s	s
Information	51	239,024	166,281	11,544	11,110	50,089
Publishing	511	108,978	78,954	4,803	5,342	19,879
Newspaper, periodical, book, and directory publishers	5111	0	0	0	0	0
Software publishers	5112	108,978	78,954	4,803	5,342	19,879
Telecommunications	517	s	s	s	s	s
Data processing, hosting, and related services	518	63,032	38,629	2,825	2,553	19,025
Other information	other 51	55,222	42,685	2,006	2,800	7,730
Finance and insurance	52	s	s	s	s	s
Real estate and rental and leasing	53	s	s	s	s	s
Lessors of nonfinancial intangible assets (except copyrighted works)	533	s	s	s	s	s
Other real estate and rental and leasing	other 53	s	s	0	0	s
Professional, scientific, and technical services	54	3,577,353	2,060,127	294,449	178,130	1,044,647
Architectural, engineering, and related services	5413	381,344	227,603	45,313	21,414	87,014
Computer systems design and related services	5415	1,456,420	901,215	99,020	92,751	363,434
Scientific research and development services	5417	889,127	377,600	90,677	15,865	404,986
Biotechnology research and development	541711	337,866	120,159	26,759	5,506	185,442
Physical, engineering, and life sciences (except biotechnology) research and development	541712	529,224	244,199	62,841	9,632	212,552
Social sciences and humanities research and development	541720	22,037	13,241	1,077	727	6,992
Other professional, scientific, and technical services	other 54	850,462	553,709	59,439	48,100	189,214
Health care services	621–23	49,510	23,240	s	s	14,516
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	s	s	s	2	s

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

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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.

Source(s)

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