

TABLE 57

Domestic R&D employment and level of education of researchers, by occupation, industry, and company size: 2016

(Thousands)

Industry and company size	NAICS code	Total	Researchers ^a		R&D technicians and equivalent staff	Other R&D supporting staff
			Total	With PhD		
All industries	21-23, 31-33, 42-81	1,522	1,064	120	306	152
Manufacturing industries	31-33	912	646	77	164	102
Food	311	24	14	2	6	3
Beverages and tobacco products	312	6	4	1	2	1
Textiles, apparel, and leather products	313-16	8	4	1	3	1
Wood products	321	3	1	*	1	*
Paper	322	6	4	*	1	*
Printing and related support activities	323	4	2	*	1	*
Petroleum and coal products	324	2	1	*	1	*
Chemicals	325	173	118	30	30	25
Basic chemicals	3251	14	8	3	4	2
Resins, synthetic rubber, and artificial synthetic fibers and filaments	3252	5	3	1	1	*
Pesticides, fertilizers, and other agricultural chemicals	3253	5	2	1	2	1
Pharmaceuticals and medicines	3254	123	85	22	18	20
Soaps, cleaning compounds, and toilet preparations	3256	13	11	2	1	1
Paints, coatings, adhesives, and other chemicals	3255, 3259	13	9	1	3	1
Plastics and rubber products	326	29	14	3	10	6
Nonmetallic mineral products	327	7	4	1	2	1
Primary metals	331	7	3	*	2	2
Fabricated metal products	332	30	13	*	9	8
Machinery	333	78	55	4	17	6
Agricultural implements	33311	9	6	*	2	1
Semiconductor machinery	333242	9	8	1	1	*
Engines, turbines, and power transmission equipment	3336	7	6	*	1	*
Other machinery	other 333	53	35	2	13	5
Computer and electronic products	334	264	215	23	31	18
Communications equipment	3342	48	37	2	7	3
Semiconductors and other electronic components	3344	96	82	12	9	5
Navigational, measuring, electromedical, and control instruments	3345	69	54	5	10	5
Electromedical, electrotherapeutic, and irradiation apparatuses	334510, 334517	12	9	1	2	1
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	29	23	1	4	2
Other measuring and controlling devices	other 3345	28	21	3	4	3
Other computer and electronic products	other 334	50	41	4	4	5
Electrical equipment, appliances, and components	335	28	20	2	6	2
Transportation equipment	336	168	122	7	28	17
Automobiles, bodies, trailers, and parts	3361-63	92	72	3	13	7
Aerospace products and parts	3364	61	42	4	12	7
Aircraft, aircraft engines, and aircraft parts	336411-13	50	35	3	10	5
Guided missiles, space vehicles, and related parts	336414-15, 336419	11	7	*	2	2
Military armored vehicles, tanks, and tank components	336992	*	*	*	*	*
Other transportation	other 336	15	9	*	3	3
Furniture and related products	337	5	2	*	1	1
Miscellaneous manufacturing	339	70	47	4	13	10
Medical equipment and supplies	3391	47	34	3	9	4
Other miscellaneous manufacturing	3399	23	14	*	4	5

TABLE 57

Domestic R&D employment and level of education of researchers, by occupation, industry, and company size: 2016

(Thousands)

Industry and company size	NAICS code	Total	Researchers ^a		R&D technicians and equivalent staff	Other R&D supporting staff
			Total	With PhD		
Nonmanufacturing industries	21-23, 42-81	610	418	42	142	51
Mining, extraction, and support activities	21	12	6	1	4	2
Utilities	22	3	1	*	*	1
Wholesale trade	42	11	5 i	* i	4 i	2 i
Electronic shopping and electronic auctions	454111-12	5 i	3 i	* i	1 i	1 i
Transportation and warehousing	48-49	3 i	2	*	* i	1 i
Information	51	277	213	15	46	18
Publishing	511	143	120	5	11	12
Newspaper, periodical, book, and directory publishers	5111	1	1 i	*	* i	* i
Software publishers	5112	142	120	5	11	11
Telecommunications	517	24	16	* i	8 i	1
Data processing, hosting, and related services	518	62	40	2 i	17	5
Other information	other 51	49	38	8	10	1
Finance and insurance	52	37	12	*	23	2
Real estate and rental and leasing	53	2	2	*	*	* i
Lessors of nonfinancial intangible assets (except copyrighted works)	533	*	*	*	*	*
Other real estate and rental and leasing	other 53	2	2	*	*	* i
Professional, scientific, and technical services	54	240	162	24 i	58 i	20 i
Architectural, engineering, and related services	5413	46	34 i	6 i	9 i	3 i
Computer systems design and related services	5415	92	71 i	8 i	14	6 i
Scientific research and development services	5417	79	42	9	28 i	9 i
Biotechnology research and development	541711	21	15	2	6	1
Physical, engineering, and life sciences (except biotechnology) research and development	541712	52	26	6	20 i	6
Social sciences and humanities research and development	541720	6	1	*	2 i	2 i
Other professional, scientific, and technical services	other 54	24	15 i	2 i	7 i	3
Health care services	621-23	4	2	1 i	1	1 i
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	16	10 i	* i	3 i	2 i
All companies (number of domestic employees)	-	1,522	1,064	120	306	152
Micro companies ^b						
5-9	-	15	11 i	2 i	3 i	1 i
Small companies						
10-19	-	37	25 i	3 i	8 i	4 i
20-49	-	75	50 i	7	17 i	9 i
Medium companies						
50-99	-	69	43 i	6	18 i	9 i
100-249	-	101	65	8	25	11 i
Large companies						
250-499	-	75	49	5	18	8
500-999	-	74	50	5 i	17	7
1,000-4,999	-	278	192	20 i	55	31
5,000-9,999	-	159	119	14 i	25 i	15 i
10,000-24,999	-	243	165	23	53	24
25,000 or more	-	395	295	27	67	33

* = amount < 500; i = > 50% of the estimate is a combination of imputation and reweighting to account for nonresponse.

National Center for Science and Engineering Statistics | NSF 19-318

NAICS = 2012 North American Industry Classification System.

^a Researchers include R&D scientists and engineers and their managers.

^b 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.

Source(s)

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