

TABLE 53

Worldwide, domestic, and foreign total and R&D employment, by industry and company size: 2016

(Thousands)

Industry and company size	NAICS code	Worldwide employees			Domestic employees			Foreign employees		
		Total	R&D	% R&D employees	Total	R&D	% R&D employees	Total	R&D	% R&D employees
All industries	21-23, 31-33, 42-81	30,667	2,195	7.2	19,293	1,522	7.9	11,374	674	5.9
Manufacturing industries	31-33	17,557	1,318	7.5	9,879	912	9.2	7,678	406	5.3
Food	311	1,769	38	2.1	1,125	24	2.1	644	14	2.2
Beverages and tobacco products	312	751	9	1.2	269	6	2.4	482	3	0.6
Textiles, apparel, and leather products	313-16	512	9	1.8	291	8	2.9	222	1	0.4
Wood products	321	128	3	2.4	100	3	2.7	28	*	1.2
Paper	322	240	8	3.3	150	6	3.8	90	2	2.3
Printing and related support activities	323	138	4	2.9	116	4	3.1	22	*	1.6
Petroleum and coal products	324	80	2	3.1	58	2	3.4	22	*	2.3
Chemicals	325	2,295	236	10.3	1,257	173	13.8	1,038	63	6.1
Basic chemicals	3251	319	19	6.0	218	14	6.5	101	5	4.9
Resins, synthetic rubber, and artificial synthetic fibers and filaments	3252	164	8	4.7	82	5	5.7	82	3	3.7
Pesticides, fertilizers, and other agricultural chemicals	3253	70 i	7 i	10.4	40 i	5 i	12.8	30	2 i	7.2
Pharmaceuticals and medicines	3254	1,010	161	16.0	562	123	21.8	448	39	8.6
Soaps, cleaning compounds, and toilet preparations	3256	421	21	4.9	178	13	7.5	243	7	3.0
Paints, coatings, adhesives, and other chemicals	3255, 3259	312	20	6.5	178	13	7.4	134	7	5.3
Plastics and rubber products	326	740	37	5.0	510	29	5.8	230	8	3.4
Nonmetallic mineral products	327	281	9	3.0	194	7	3.8	87	1	1.4
Primary metals	331	277	8	2.8	195	7	3.6	82	1	1.0
Fabricated metal products	332	557	33	5.9	413	30	7.3	143	3	2.0
Machinery	333	1,475	113	7.7	824	78	9.5	650	35	5.3
Agricultural implements	33311	153	15	9.8	84	9	10.7	70	6	8.7
Semiconductor machinery	333242	78	14	17.4	28	9	31.5	50 i	5	9.5
Engines, turbines, and power transmission equipment	3336	158	12	7.4	84	7	8.9	74	4	5.6
Other machinery	other 333	1,086	73	6.7	629	53	8.4	457	20	4.3
Computer and electronic products	334	2,897	424	14.6	1,336	264	19.7	1,561	160	10.3
Communications equipment	3342	290	77	26.7	171	48	28.1	119	29	24.7
Semiconductors and other electronic components	3344	1,010	156	15.5	410	96	23.4	600	61	10.1
Navigational, measuring, electromedical, and control instruments	3345	956	100	10.4	501	69	13.8	454	30	6.6

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Electromedical, electrotherapeutic, and irradiation apparatuses	334510, 334517	137	19	14.0	72	12	17.0	65	7	10.6
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	298	33	11.1	208	29	14.1	91	4	4.2
Other measuring and controlling devices	other 3345	520	47	9.1	221	28	12.6	299	20	6.6
Other computer and electronic products	other 334	642	90	14.1	255	50	19.8	387	40	10.4
Electrical equipment, appliances, and components	335	766	51	6.7	306	28	9.0	460	23	5.1
Transportation equipment	336	3,286	236	7.2	1,953	168	8.6	1,333	68	5.1
Automobiles, bodies, trailers, and parts	3361-63	2,162	135	6.3	1,088	92	8.5	1,074	43	4.0
Aerospace products and parts	3364	858	85	9.8	643	61	9.5	215	24	11.0
Aircraft, aircraft engines, and aircraft parts	336411-13	810	73	9.1	607	50	8.2	203	24	11.7
Guided missiles, space vehicles, and related parts	336414-15, 336419	48	11	22.9	36	11	30.4	12	*	0.5
Military armored vehicles, tanks, and tank components	336992	1	*	13.2	1	*	13.2	0	0	0.0
Other transportation	other 336	265	i 17	6.2	221	i 15	6.6	44	2	4.5
Furniture and related products	337	172	5	2.9	147	5	3.1	25	*	1.8
Miscellaneous manufacturing	339	1,194	92	7.7	635	70	11.0	559	22	3.9
Medical equipment and supplies	3391	827	65	7.8	429	47	11.0	398	17	4.4
Other miscellaneous manufacturing	3399	367	27	i 7.5	206	23	i 11.1	161	i 5	i 2.8
Nonmanufacturing industries	21-23, 42-81	13,111	878	6.7	9,414	610	6.5	3,697	268	7.2
Mining, extraction, and support activities	21	413	14	3.4	199	12	5.9	214	2	1.1
Utilities	22	383	3	0.7	373	3	0.7	10	*	0.7
Wholesale trade	42	356	12	3.3	294	11	3.8	63	*	0.7
Electronic shopping and electronic auctions	454111-12	300	6	i 2.1	197	5	i 2.5	103	1	i 1.2
Transportation and warehousing	48-49	1,564	3	i 0.2	1,368	3	i 0.2	196	i *	*
Information	51	2,572	414	16.1	1,832	277	15.1	740	137	18.5
Publishing	511	1,078	241	22.4	650	143	22.0	428	98	23.0
Newspaper, periodical, book, and directory publishers	5111	23	1	4.3	19	1	4.7	3	*	1.7
Software publishers	5112	1,055	240	22.8	630	142	22.5	425	98	23.1
Telecommunications	517	752	25	3.3	684	24	3.5	68	1	i 1.7

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Data processing, hosting, and related services	518	556	87	15.6	355	62	17.4	200	25	12.5
Other information	other 51	186	61	32.9	143	49	34.1	44	13	28.9
Finance and insurance	52	1,420	47	3.3	1,114	37	3.4	306	10	3.2
Real estate and rental and leasing	53	19	3	13.7	18	2	14.1	1	*	6.7
Lessors of nonfinancial intangible assets (except copyrighted works)	533	2	*	15.6	2	*	12.7	*	*	87.1
Other real estate and rental and leasing	other 53	17	2	13.5	16	2	14.3	1	*	1.8
Professional, scientific, and technical services	54	2,439	355	14.5	1,373	240	17.5	1,066	114	10.7
Architectural, engineering, and related services	5413	444	52	11.7	323	46	14.3	121	6	4.8
Computer systems design and related services	5415	1,278	140	10.9	480	92	19.1	798	48	6.0
Scientific research and development services	5417	354	133	37.6	264	79	29.8	90	55	60.7
Biotechnology research and development	541711	145	35	24.4	125	21	17.0	20	14	69.9
Physical, engineering, and life sciences (except biotechnology) research and development	541712	195	92	47.3	126	52	41.2	69	40	58.5
Social sciences and humanities research and development	541720	14	6	39.4	14	6	40.7	*	*	2.1
Other professional, scientific, and technical services	other 54	362	30	8.2	306	24	7.9	56	6	9.8
Health care services	621-23	441	4	0.9	436	4	0.9	6	*	3.0
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	3,204	18	0.6	2,212	16	0.7	992	2	0.2
All companies (number of domestic employees)	-	30,667	2,195	7.2	19,293	1,522	7.9	11,374	674	5.9
Micro companies ^a										
5-9	-	38	17	44.9	34	15	43.2	4	2	60.3
Small companies										
10-19	-	122	40	33.0	111	37	33.6	10	3	27.2
20-49	-	353	82	23.3	323	75	23.2	30	7	24.1
Medium companies										
50-99	-	495	76	15.3	413	69	16.8	82	7	7.9
100-249	-	1,006	116	11.6	764	101	13.3	242	15	6.2
Large companies										
250-499	-	962	94	9.7	700	75	10.7	263	18	7.0
500-999	-	1,035	98	9.5	739	74	10.0	296	24	8.2

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1,000–4,999	–	4,388	440	10.0	2,583	278	10.7	1,805	163	9.0
5,000–9,999	–	3,731	237	6.4	1,859	159	8.6	1,872	78	4.2
10,000–24,999	–	5,085	373	7.3	2,898	243	8.4	2,188	130	6.0
25,000 or more	–	13,452	621	4.6	8,869	395	4.5	4,583	226	4.9

* = amount < 500 employees or less than 0.05%; 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.

Source(s)

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