

TABLE 49

## Worldwide, domestic, and foreign R&amp;D employment, by sex, industry, and company size: 2022

(Thousands)

Industry and company size	NAICS code	Worldwide			Domestic			Foreign		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
All industries	21–23, 31–33, 42–81	3,186	2,232	954	2,110	1,501	609	1,076	731	345
Manufacturing industries	31–33	1,527	1,087	439	1,008	723	285	518	364	154
Food	311	46	25	21	30	17	13	16	8	8
Beverage and tobacco products	312	7	4	3	5	3	2	2	1	1
Textile, apparel, and leather products	313–16	6	4	3	5	3	2	2	1	1
Wood products	321	4	3	*	4	3	*	*	*	*
Paper	322	8	6	2	7	5	2	1	1	1
Printing and related support activities	323	2	1	*	2	1	*	*	*	*
Petroleum and coal products	324	6	4	2	4	3	1	2	1	1
Chemicals	325	302	149	152	217	110	107	85	39	45
Basic chemicals	3251	21	14	7	13	9	4	8	5	3
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	11	8	3	7	5	2	4	3	1
Pesticide, fertilizer, and other agricultural chemicals	3253	5	3	2	4	3	1	1	*	*
Pharmaceuticals and medicines	3254	233	107	126	172	81	91	61	26	35
Soap, cleaning compound, and toilet preparations	3256	19	8	11	12	5	7	7	3	4
Paint, coating, adhesive, and other chemicals	3255, 3259	12	9	4	9	6	2	3	2	1
Plastics and rubber products	326	30	23	7	22	17	5	8	6	2
Nonmetallic mineral products	327	7	6	2	6	5	1	1	1	*
Primary metals	331	8	7	1	8	6	1	1	*	*
Fabricated metal products	332	40	34	6	38	33	5	2	1	*
Machinery	333	167	140	27	105	89	16	62	51	11
Agricultural implement	33311	18	16	2	10	9	1	8	7	1
Semiconductor machinery	333242	28	24	5	14	12	2	14	12	2
Engine, turbine, and power transmission equipment	3336	26	22	4	15	13	2	10	9	2
Other machinery	other 333	95	78	17	65	55	10	30	23	6
Computer and electronic products	334	460	351	109	245	190	55	215	161	54
Communications equipment	3342	69	56	13	36	29	7	32	26	6
Semiconductor and other electronic components	3344	204	151	54	93	70	23	111	81	31
Navigational, measuring, electromedical, and control instruments	3345	77	58	19	53	40	12	24	18	6
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	20	15	5	16	12	4	4	3	1
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	20	16	4	16	13	3	4	3	1
Other measuring and controlling devices	other 3345	37	28	10	20	15	5	17	13	4
Other computer and electronic products	other 334	110	86	24	63	51	12	47	35	11
Electrical equipment, appliances, and components	335	42	34	8	27	22	5	14	12	3
Transportation equipment	336	265	213	52	195	156	38	70	57	14

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		Total	Male	Female	Total	Male	Female	Total	Male	Female
Motor vehicles, bodies, trailers, and parts	3361-63	164	132	33	110	88	23	54	44	10
Aerospace products and parts	3364	86	71	15	71	59	12	14	12	3
Aircraft, aircraft engine, and aircraft parts	336411-13	58	48	10	50	42	9	8	7	1
Guided missile, space vehicle, and related parts	336414-15, 336419	27	23	5	21	18	4	6	5	1
Military armored vehicle, tank, and tank components	336992	*	*	*	*	*	*	0	0	0
Other transportation	other 336	15	10	4	12	9	4	2	2	1
Furniture and related products	337	5	4	1	4	3	1	*	*	* i
Miscellaneous	339	122	80	42	85	56	29	37	24	13
Medical equipment and supplies	3391	102	65	37	69	44	25	33	21	12
Other miscellaneous manufacturing	3399	19	14	5	16	12	4	4	3	1
Nonmanufacturing industries	21-23, 42-81	1,660	1,145	515	1,102	778	324	558	367	191
Mining, quarrying, oil and gas extraction, and support activities	21	10	9	1	9	8	1	1	1	*
Utilities	22	5	4	1	5	D	D	*	D	D
Wholesale trade	42	22	16	6	21	16	5	1	1	*
Electronic shopping and electronic auctions	454111-12	D	D	D	77	59	18	D	D	D
Transportation and warehousing	48-49	19	14	4	18	14	4	1	1	*
Information	51	781	574	207	489	360	129	292	214	77
Publishing	511	258	188	71	145	108	37	114	80	34
Newspaper, periodical, book, and directory publishers	5111	1	*	*	1	*	*	0	0	0
Software publishers	5112	258	187	71	144	107	37	114	80	34
Telecommunications	517	13	9	4	11	7	3	2	1	1
Data processing, hosting, and related services	518	302	220	82	177	126	51	125	94	31
Other information	other 51	208	158	50	157	119	38	51	39	12
Finance and insurance	52	88	57	30	52	35	17	35	22	13
Real estate and rental and leasing	53	6	4	2	6	D	D	*	D	D
Lessors of nonfinancial intangible assets (except copyrighted works)	533	*	*	*	*	*	*	*	*	0
Other real estate and rental and leasing	other 53	6	4	2	6	D	D	*	D	D
Professional, scientific, and technical services	54	549	336	214	376	244	132	173	91	81
Architectural, engineering, and related services	5413	70	51	19	69	50	18	1	1	*
Computer systems design and related services	5415	164	121	43	111	84	27	53	38	16
Scientific research and development services	5417	259	125	134	149	77	72	110	47	62
Research and development in nanotechnology	541713	2	1	*	1	1	*	*	*	*
Research and development in biotechnology (except nanobiotechnology)	541714	74	32	42	35	16	19	39	16	23
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	173	89	85	103	58	45	70	31	39
Research and development in the social sciences and humanities	541720	10	3	7	10	3	7	*	*	*

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		Total	Male	Female	Total	Male	Female	Total	Male	Female
Other professional, scientific, and technical services	other 54	57	39	18	48	33	15	9	6	3
Health care services	621-23	11	6	6	11	5	5	1	*	*
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	D	D	D	36	D	D	D	D	D
All companies (number of domestic employees)	-	3,186	2,232	954	2,110	1,501	609	1,076	731	345
Small companies										
10-19 <sup>a</sup>	-	37	29	8	34	27	7	3	3	1
20-49	-	98	78	20	89	71	18	9	7	2
Medium companies										
50-99	-	101	78	22	87	69	19	13	9	4
100-249	-	164	126	39	143	109	34	21	16	5
Large companies										
250-499	-	160	115	45	123	88	35	37	27	10
500-999	-	175	127	49	131	94	37	44	32	12
1,000-4,999	-	552	391	161	348	246	102	205	145	60
5,000-9,999	-	277	199	78	181	128	53	96	71	24
10,000-24,999	-	565	367	198	338	224	114	227	143	85
25,000 or more	-	1,057	722	i 334	636	445	192	421	278	143

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

NAICS = 2017 North American Industry Classification System.

<sup>a</sup> The Business Enterprise Research and Development Survey does not include companies with fewer than 10 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 \$50,000 or more of R&D and are not comparable with estimates published for years prior to 2018.

**Source(s):**

National Center for Science and Engineering Statistics and Census Bureau, Business Enterprise Research and Development Survey, 2022.