

TABLE 47

Worldwide, domestic, and foreign total and R&D employment, by industry and company size: 2022

(Thousands and percent)

Industry and company size	NAICS code	Worldwide employees			Domestic employees			Foreign employees		
		Total	R&D	Percentage of R&D employees	Total	R&D	Percentage of R&D employees	Total	R&D	Percentage of R&D employees
All industries	21–23, 31–33, 42–81	36,453	3,186	8.7	24,092	2,110	8.8	12,361	1,076	8.7
Manufacturing industries	31–33	18,462	1,527	8.3	10,251	1,008	9.8	8,211	518	6.3
Food	311	2,138	46	2.2	1,393	30	2.2	745	16	2.1
Beverage and tobacco products	312	726	7	0.9	388	5	1.2	338	2	0.7
Textile, apparel, and leather products	313–16	343	6	1.9	189	5	2.6	154	2	1.0
Wood products	321	121	4	3.0	110	4	3.3	11	*	0.4
Paper	322	262	8	3.2	183	7	3.7	79	1	1.9
Printing and related support activities	323	120	2	1.6	96	2	1.9	23	*	0.2
Petroleum and coal products	324	146	6	4.0	94	4	4.2	51	2	3.8
Chemicals	325	2,534	302	11.9	1,446	217	15.0	1,088	85	7.8
Basic chemicals	3251	383	21	5.5	235	13	5.6	148	8	5.3
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	190	11	5.8	101	7	6.9	88	4	4.6
Pesticide, fertilizer, and other agricultural chemicals	3253	84	5	6.0	64	4	6.9	20	1	3.2
Pharmaceuticals and medicines	3254	1,139	233	20.5	664	172	25.9	475	61	12.9
Soap, cleaning compound, and toilet preparations	3256	442	19	4.4	220	12	5.6	222	7	3.2
Paint, coating, adhesive, and other chemicals	3255, 3259	296	12	4.1	161	9	5.5	135	3	2.5
Plastics and rubber products	326	715	30	4.2	490	22	4.5	225	8	3.5
Nonmetallic mineral products	327	239	7	3.1	141	6	4.3	98	1	1.2
Primary metals	331	225	8	3.6	175	8	4.3	50	1	1.1
Fabricated metal products	332	532	40	7.5	408	38	9.3	124	2	1.4
Machinery	333	1,942	167	8.6	941	105	11.1	1,001	62	6.2
Agricultural implement	33311	189	18	9.6	102	10	10.1	87	8	9.0
Semiconductor machinery	333242	124	28	22.9	41	14	34.6	83	14	17.2
Engine, turbine, and power transmission equipment	3336	341	26	7.6	139	15	11.1	202	10	5.1
Other machinery	other 333	1,287	95	7.4	659	65	9.9	628	30	4.7
Computer and electronic products	334	2,685	460	17.1	1,033	245	23.7	1,652	215	13.0
Communications equipment	3342	255	69	26.9	131	36	27.6	123	32	26.2
Semiconductor and other electronic components	3344	1,174	204	17.4	311	93	29.9	862	111	12.9
Navigational, measuring, electromedical, and control instruments	3345	587	77	13.1	319	53	16.5	268	24	9.0
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	129	20	15.6	103	16	16.1	26	4	13.7
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	87	20	22.4	66	16	24.0	21	4	17.4
Other measuring and controlling devices	other 3345	371	37	10.1	150	20	13.5	221	17	7.7
Other computer and electronic products	other 334	670	110	16.4	272	63	23.3	398	47	11.7
Electrical equipment, appliances, and components	335	759	42	5.5	373	27	7.3	386	14	3.7

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Transportation equipment	336	3,283	265	8.1	1,856	195	10.5	1,427	70	4.9
Motor vehicles, bodies, trailers, and parts	3361-63	1,988	164	8.3	896	110	12.3	1,092	54	4.9
Aerospace products and parts	3364	1,035	86	8.3	766	71	9.3	269	14	5.3
Aircraft, aircraft engine, and aircraft parts	336411-13	697	58	8.4	561	50	8.9	136	8	6.0
Guided missile, space vehicle, and related parts	336414-15, 336419	338	27	8.1	206	21	10.3	133	6	4.6
Military armored vehicle, tank, and tank components	336992	3	*	11.2	3	*	11.2	0	0	NA
Other transportation	other 336	257	15	5.8	191	12	6.5	66	2	3.7
Furniture and related products	337	157	5	2.9	124	4	3.4	33	*	1.1
Miscellaneous	339	1,536	122	7.9	811	85	10.5	726	37	5.1
Medical equipment and supplies	3391	1,173	102	8.7	573	69	12.1	600	33	5.5
Other miscellaneous manufacturing	3399	363	19	5.4	238	16	6.6	126	4	3.0
Nonmanufacturing industries	21-23, 42-81	17,991	1,660	9.2	13,840	1,102	8.0	4,150	558	13.4
Mining, quarrying, oil and gas extraction, and support activities	21	242	10	4.1	187	9	4.9	55	1	1.2
Utilities	22	344	5	1.6	335	5	1.6	9	*	2.1
Wholesale trade	42	641	22	3.4	524	21	4.0	117	1	0.7
Electronic shopping and electronic auctions	454111-12	D	D	D	D	77	D	D	D	D
Transportation and warehousing	48-49	1,462	19	1.3	1,183	18	1.5	279	1	0.3
Information	51	3,531	781	22.1	2,394	489	20.4	1,138	292	25.6
Publishing	511	826	258	31.3	480	145	30.2	346	114	32.8
Newspaper, periodical, book, and directory publishers	5111	5	1	12.0	5	1	12.6	*	0	0.0
Software publishers	5112	821	258	31.4	475	144	30.3	346	114	32.9
Telecommunications	517	573	13	2.2	518	11	2.0	55	2	3.5
Data processing, hosting, and related services	518	1,460	302	20.7	925	177	19.2	535	125	23.4
Other information	other 51	673	208	30.9	471	157	33.3	202	51	25.3
Finance and insurance	52	1,792	88	4.9	1,310	52	4.0	483	35	7.3
Real estate and rental and leasing	53	213	6	3.0	189	6	3.1	24	*	2.0
Lessors of nonfinancial intangible assets (except copyrighted works)	533	1	*	5.9	1	*	4.0	*	*	19.9
Other real estate and rental and leasing	other 53	212	6	3.0	188	6	3.1	24	*	1.9
Professional, scientific, and technical services	54	2,696	549	20.4	1,646	376	22.9	1,049	173	16.5
Architectural, engineering, and related services	5413	418	70	16.7	328	69	21.0	90	1	0.9
Computer systems design and related services	5415	1,118	164	14.7	525	111	21.1	592	53	9.0
Scientific research and development services	5417	659	259	39.3	406	149	36.7	253	110	43.3
Research and development in nanotechnology	541713	4	2	41.9	3	1	40.7	*	*	56.3
Research and development in biotechnology (except nanobiotechnology)	541714	170	74	43.4	122	35	28.7	48	39	80.6

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Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	471	173	36.8	267	103	38.5	204	i	70	i	34.5
Research and development in the social sciences and humanities	541720	14	10	72.3	14	10	72.3	*		*		69.5
Other professional, scientific, and technical services	other 54	501	57	11.3	387	48	12.3	115		9		7.8
Health care services	621-23	415	11	2.7	398	11	2.7	17		1		3.3
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	D	D	D	D	36	D	D		D		D
All companies (number of domestic employees)	-	36,453	3,186	8.7	24,092	2,110	8.8	12,361		1,076		8.7
Small companies												
10-19 ^a	-	100	37	37.3	86	34	39.3	14		3		24.6
20-49	-	311	98	31.5	267	89	33.4	44		9		20.4
Medium companies												
50-99	-	438	101	23.0	366	87	23.8	72		13		18.4
100-249	-	1,004	164	16.4	808	143	17.7	195		21		10.9
Large companies												
250-499	-	1,144	160	14.0	768	123	16.0	376		37		9.8
500-999	-	1,428	175	12.3	993	131	13.2	435		44		10.1
1,000-4,999	-	5,238	552	10.5	3,159	348	11.0	2,079		205		9.9
5,000-9,999	-	3,638	277	7.6	1,909	181	9.5	1,729		96		5.5
10,000-24,999	-	5,896	565	9.6	3,373	338	10.0	2,523		227		9.0
25,000 or more	-	17,256	1,057	6.1	12,363	636	5.1	4,893		421		8.6

* = 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; NA = not available.

NAICS = 2017 North American Industry Classification System.

^a 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.