

TABLE 52

Foreign total employment, R&D employment, and level of education of researchers, by activity, industry, and company size: 2022

(Thousands)

Industry and company size	NAICS code	Total employment	Total R&D employment	Researchers ^a		R&D technicians and equivalent staff	Other R&D supporting staff
				Total	With PhD		
All industries	21-23, 31-33, 42-81	12,361	1,076	757	42	228	91
Manufacturing industries	31-33	8,211	518	393	27	71	54
Food	311	745	16	10	1	3	3
Beverage and tobacco products	312	338	2	1	*	1	*
Textile, apparel, and leather products	313-16	154	2	* i	* i	1	*
Wood products	321	11	*	*	*	*	*
Paper	322	79	1	1	*	*	*
Printing and related support activities	323	23	*	* i	*	*	*
Petroleum and coal products	324	51	2	1	*	1	*
Chemicals	325	1,088	85	48	8	13	24
Basic chemicals	3251	148	8	3	1	5	i *
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	88	4	2	*	1	*
Pesticide, fertilizer, and other agricultural chemicals	3253	20	1	*	* i	*	*
Pharmaceuticals and medicines	3254	475	61	33	6	5	i 23
Soap, cleaning compound, and toilet preparations	3256	222	7	6	1	*	*
Paint, coating, adhesive, and other chemicals	3255, 3259	135	3	3	*	1	*
Plastics and rubber products	326	225	8	5	* i	3	1
Nonmetallic mineral products	327	98	1	1	*	*	*
Primary metals	331	50	1	*	*	*	*
Fabricated metal products	332	124	2	1	*	*	*
Machinery	333	1,001	62	49	3	10	3
Agricultural implement	33311	87	8	7	*	1	*
Semiconductor machinery	333242	83	14	11	1	4	*
Engine, turbine, and power transmission equipment	3336	202	10	9	*	1	1
Other machinery	other 333	628	30	23	2	5	1 i
Computer and electronic products	334	1,652	215	185	7	17	13
Communications equipment	3342	123	32	28	1	2	2
Semiconductor and other electronic components	3344	862	111	99	4	10	2
Navigational, measuring, electromedical, and control instruments	3345	268	24	20	1	2	2
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	26	4	3	* i	*	1
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	21	4	3	* i	*	*
Other measuring and controlling devices	other 3345	221	17	14	1	2	1
Other computer and electronic products	other 334	398	47	38	1	2	6

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Electrical equipment, appliances, and components	335	386	14	8	2 i	4	2
Transportation equipment	336	1,427	70	57	3 i	9	4
Motor vehicles, bodies, trailers, and parts	3361-63	1,092	54	44	2 i	7 i	3 i
Aerospace products and parts	3364	269	14	12	1	1	1
Aircraft, aircraft engine, and aircraft parts	336411-13	136	8	6	1	1	*
Guided missile, space vehicle, and related parts	336414-15, 336419	133	i 6	i 6	i *	*	*
Military armored vehicle, tank, and tank components	336992	0	0	0	0	0	0
Other transportation	other 336	66	2	1	* i	1	1
Furniture and related products	337	33	*	*	* i	*	* i
Miscellaneous	339	726	37	25	2	9	3
Medical equipment and supplies	3391	600	33	22	2	8	3
Other miscellaneous manufacturing	3399	126	4	2	*	1	*
Nonmanufacturing industries	21-23, 42-81	4,150	558	364	14 i	157 i	37
Mining, quarrying, oil and gas extraction, and support activities	21	55	1	D	*	D	D
Utilities	22	9	*	*	*	D	D
Wholesale trade	42	117	i 1	D	* i	D	D
Electronic shopping and electronic auctions	454111-12	D	D	27	i 0	D	D
Transportation and warehousing	48-49	279	1	1	0	D	D
Information	51	1,138	292	211	9 i	59	22
Publishing	511	346	114	82	4 i	24	8
Newspaper, periodical, book, and directory publishers	5111	*	0	0	0	0	0
Software publishers	5112	346	114	82	4 i	24	8
Telecommunications	517	55	2	2	*	*	*
Data processing, hosting, and related services	518	535	125	86	2 i	26	13
Other information	other 51	202	51	41	3	9	1
Finance and insurance	52	483	35	27	* i	8	1
Real estate and rental and leasing	53	24	*	* i	0	D	D
Lessors of nonfinancial intangible assets (except copyrighted works)	533	*	i *	* i	0	* i	0
Other real estate and rental and leasing	other 53	24	*	* i	0	D	D
Professional, scientific, and technical services	54	1,049	173	97	5 i	66	10 i
Architectural, engineering, and related services	5413	90	1	1	*	*	*
Computer systems design and related services	5415	592	53	42	2 i	7	4
Scientific research and development services	5417	253	i 110	i 48	2	56	i 5

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				Total	With PhD		
Research and development in nanotechnology	541713	*	*	*	* i	*	*
Research and development in biotechnology (except nanobiotechnology)	541714	48 i	39 i	16	1	23 i	* i
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	204 i	70 i	32	1	34 i	5 i
Research and development in the social sciences and humanities	541720	*	*	*	0	0	*
Other professional, scientific, and technical services	other 54	115	9	6	* i	3	1 i
Health care services	621-23	17	1	D	* i	D	D
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	D	D	D	*	D	D
All companies (number of domestic employees)	-	12,361	1,076	757	42 i	228 i	91
Small companies							
10-19 ^b	-	14	3	2	*	1	*
20-49	-	44	9	6	*	2	*
Medium companies							
50-99	-	72	13	8	1	4	1
100-249	-	195	21	16	1 i	4	1
Large companies							
250-499	-	376	37	26	1	7	4
500-999	-	435	44	31	2 i	9	3
1,000-4,999	-	2,079	205	131	8 i	57	18
5,000-9,999	-	1,729	96	77	4	13 i	6
10,000-24,999	-	2,523	227	141	8 i	70 i	16 i
25,000 or more	-	4,893	421	318	16	61 i	41

* = 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.

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

^b 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.