

TABLE 50

Worldwide total employment, R&D employment, and level of education of researchers, by activity, industry, and company size: 2020

(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	33,086	2,847	1,924	163	658	265
Manufacturing industries	31-33	17,454	1,457	1,025	107	274	157
Food	311	1,723	44	23	4	12	9
Beverage and tobacco products	312	585	7	5	1	2	1
Textile, apparel, and leather products	313-16	428	8	3	1	3	1
Wood products	321	118	3	1	*	2	*
Paper	322	294	8	5	*	2	1
Printing and related support activities	323	159	5	2	*	1	1
Petroleum and coal products	324	167	8	3	1	4	1
Chemicals	325	2,518	266	171	44	47	48
Basic chemicals	3251	462	19	10	3	7	1
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	154	10	6	1	3	1
Pesticide, fertilizer, and other agricultural chemicals	3253	95	5	3	1	1	1
Pharmaceuticals and medicines	3254	1,034	193	123	36	29	41
Soap, cleaning compound, and toilet preparation	3256	445	17	13	2	2	2
Paint, coating, adhesive, and other chemicals	3255, 3259	328	21	15	2	4	2
Plastics and rubber products	326	724	32	15	1	12	5
Nonmetallic mineral products	327	227	7	4	1	2	1
Primary metals	331	182	8	2	*	2	4
Fabricated metal products	332	586	42	18	1	17	7
Machinery	333	1,786	153	98	6	41	14
Agricultural implement	33311	160	18	12	1	4	2
Semiconductor machinery	333242	96	22	15	2	6	1
Engine, turbine, and power transmission equipment	3336	226	12	9	1	2	*
Other machinery	other 333	1,304	102	62	2	29	11
Computer and electronic products	334	2,642	459	385	32	44	30
Communications equipment	3342	297	75	59	3	10	6
Semiconductor and other electronic components	3344	756	177	159	13	11	6
Navigational, measuring, electromedical, and control instruments	3345	896	96	78	8	14	5
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	110	10	8	1	2	*
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	386	40	34	3	4	2
Other measuring and controlling device	other 3345	401	46	36	4	7	2
Other computer and electronic products	other 334	692	111	88	7	9	13

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Electrical equipment, appliances, and components	335	713	51	37	1	9	5
Transportation equipment	336	2,731	234	174	9	40	20
Motor vehicles, bodies, trailers, and parts	3361-63	1,728	151	117	6	23	11
Aerospace products and parts	3364	785	69	49	3	14	6
Aircraft, aircraft engine, and aircraft parts	336411-13	752	61	44	3	12	5
Guided missile, space vehicle, and related parts	336414-15, 336419	33	8	5	*	2	1
Military armored vehicle, tank, and tank component	336992	2	*	*	*	*	0
Other transportation	other 336	216	14	8	*	3	3
Furniture and related products	337	195	5	2	*	2	1
Miscellaneous	339	1,678	117	75	6	32	10
Medical equipment and supplies	3391	1,247	94	60	5	26	8
Other miscellaneous manufacturing	3399	431	23	14	1	6	3
Nonmanufacturing industries	21-23, 42-81	15,632	1,390	899	56	384	107
Mining, quarrying, oil and gas extraction, and support activities	21	222	9	3-6	1	1-4	1
Utilities	22	349	0-20	1	*	0-20	0-13
Wholesale trade	42	448	13	6	*	5	2
Electronic shopping and electronic auctions	454111-12	58-4,716	58-147	40-105	*	13-55	2-14
Transportation and warehousing	48-49	1,335	13	11	*	1	1
Information	51	3,224	626	464	30	121	41
Publishing	511	739	188	147	9	29	12
Newspaper, periodical, book, and directory publishers	5111	6	1	*	*	*	*
Software publishers	5112	733	187	146	9	29	12
Telecommunications	517	638	23	10	1	12	*
Data processing, hosting, and related services	518	1,297	271	191	5	54	25
Other information	other 51	550	146	116	14	26	4
Finance and insurance	52	2,153	88	50	1	30	9
Real estate and rental and leasing	53	33	6	5	*	1	*
Lessors of nonfinancial intangible assets (except copyrighted works)	533	2	*	*	*	*	*
Other real estate and rental and leasing	other 53	31	5	5	*	1	*
Professional, scientific, and technical services	54	2,403	443	242	23	162	40
Architectural, engineering, and related services	5413	354	56	36	2	16	5
Computer systems design and related services	5415	977	136	101	4	25	10

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				Total	With PhD		
Scientific research and development services	5417	397	203	80	14 i	101 i	21 i
Research and development in nanotechnology	541713	2 i	1 i	1 i	* i	* i	* i
Research and development in biotechnology (except nanobiotechnology)	541714	128	62	28	4	34	1
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	259	133 i	48	9 i	67 i	17 i
Research and development in the social sciences and humanities	541720	8	7	3	1	1	3
Other professional, scientific, and technical services	other 54	675	49	25	2 i	20	4
Health care services	621-23	715	8	4	1 i	2	2
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	39 - 4,697	39 - 110	8 - 76	* i	0 - 51	0 - 13
All companies (number of domestic employees)	-	33,086	2,847	1,924	163	658	265
Small companies							
10-19 ^b	-	87	36	24	4	10	3
20-49	-	380	102	59	8	33	10
Medium companies							
50-99	-	446	102	57	6	36	9
100-249	-	1,029	165	96	9	49	19
Large companies							
250-499	-	990	135	94	7	30	11
500-999	-	1,304	135	89	6	33	13
1,000-4,999	-	4,727	484	335	26 i	102	47
5,000-9,999	-	3,095	265	176	18	55	33
10,000-24,999	-	6,115	494	292	28	147 i	55
25,000 or more	-	14,912	928	702	50 i	163	64

* = amount < 500 employees; 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. An estimate range may be displayed in place of a single estimate to avoid disclosing operations of individual companies.

Source(s):

National Center for Science and Engineering Statistics and Census Bureau, Business Enterprise Research and Development Survey, 2020.