

TABLE 56

Worldwide total employment, R&D employment, and level of education of researchers, by occupation, industry, and company size: 2017

(Thousands)

Industry and company size	NAICS code	Total employment	Total	Researchers ^a		R&D technicians and equivalent staff	Other R&D supporting staff
				Total	With PhD		
All industries	21-23, 31-33, 42-81	30,450	2,349	1,629	147	496	224
Manufacturing industries	31-33	17,235	1,352	984	98	232	137
Food	311	1,845	35	22	2 i	8	5
Beverage and tobacco products	312	868	7	5	1	2	1
Textile, apparel, and leather products	313-16	407	8	3	*	3	2
Wood products	321	83	3	1	*	2	1
Paper	322	395	12	9	1	2	1
Printing and related support activities	323	243	3	1	*	1	1
Petroleum and coal products	324	76	3	2	*	1	*
Chemicals	325	2,211	245	164	38	44	36
Basic chemicals	3251	311	23	13	4	7	3
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	134	7	4	1	2	*
Pesticide, fertilizer, and other agricultural chemicals	3253	84	7	5	1 i	2	*
Pharmaceuticals and medicines	3254	889	170	114	29	27	29
Soap, cleaning compound, and toilet preparation	3256	474	18	14	2	2	2
Paint, coating, adhesive, and other chemicals	3255, 3259	320	20	13	1	5	2
Plastics and rubber products	326	695	35	19	3	12	4
Nonmetallic mineral products	327	185	8	5	1 i	2	1
Primary metals	331	303	10	5	*	3	3
Fabricated metal products	332	488	31	15	1	11	4
Machinery	333	1,555	120	85	6	25	10
Agricultural implement	33311	147	14	10	*	3	1
Semiconductor machinery	333242	79	16	14	2	2	*
Engine, turbine, and power transmission equipment	3336	164	16	13	*	2	1
Other machinery	other 333	1,166	74	48	2 i	19	7
Computer and electronic products	334	2,555	419	343	28 i	44 i	32 i
Communications equipment	3342	274	75	61	2 i	7	7
Semiconductor and other electronic components	3344	703	148	131 i	12 i	11 i	6 i
Navigational, measuring, electromedical, and control instruments	3345	874	101	78	8	15 i	7 i
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	148	20	14 i	2 i	5 i	1 i
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	319	39	31 i	2	5 i	3 i
Other measuring and controlling device	other 3345	407	42	33	4	6	3
Other computer and electronic products	other 334	705	95	73	5 i	10 i	12 i

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				Total	With PhD		
Electrical equipment, appliances, and components	335	858	60	47	2	11	3
Transportation equipment	336	3,063	253	195	9	38	20
Automobiles, bodies, trailers, and parts	3361-63	1,745	131	104	5	20	8
Aerospace products and parts	3364	1,063	107	84	4	14	9
Aircraft, aircraft engine, and aircraft parts	336411-13	1,007	95	76	4	12	7
Guided missile, space vehicle, and related parts	336414-15, 336419	56	12	8	*	2	2
Military armored vehicle, tank, and tank component	336992	1	*	*	*	*	*
Other transportation	other 336	254	14	7	*	4	3
Furniture and related products	337	198	5	2	*	2	1
Miscellaneous manufacturing	339	1,210	95	63	6	21	12
Medical equipment and supplies	3391	901	72	49	5	15	8
Other miscellaneous manufacturing	3399	309	23	14	1	5	4
Nonmanufacturing industries	21-23, 42-81	13,215	997	645	49	264	88
Mining, extraction, and support activities	21	423	15	8	2	5	2
Utilities	22	476	3	1	*	1	*
Wholesale trade	42	372	i 10	4	*	2	3
Electronic shopping and electronic auctions	454111-12	441	71	43	1	24	4
Transportation and warehousing	48-49	1,418	7	4	*	2	1
Information	51	2,618	438	317	21	87	33
Publishing	511	953	224	175	9	28	21
Newspaper, periodical, book, and directory publishers	5111	9	1	*	*	*	*
Software publishers	5112	944	224	175	9	28	21
Telecommunications	517	842	32	18	1	13	1
Data processing, hosting, and related services	518	556	110	71	2	31	9
Other information	other 51	267	72	53	10	16	3
Finance and insurance	52	1,531	47	23	1	21	2
Real estate and rental and leasing	53	43	7	4	*	1	1
Lessors of nonfinancial intangible assets (except copyrighted works)	533	13	i 3	i 1	i *	i 1	i 1
Other real estate and rental and leasing	other 53	30	4	4	*	1	*
Professional, scientific, and technical services	54	2,413	358	218	23	105	34
Architectural, engineering, and related services	5413	397	46	30	1	12	4
Computer systems design and related services	5415	1,041	130	102	7	16	12
Scientific research and development services	5417	387	148	63	13	69	16
Biotechnology research and development	541711	141	32	20	3	11	1

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				Total	With PhD		
Physical, engineering, and life sciences (except biotechnology) research and development	541712	232	106	36	7	58	13
Social sciences and humanities research and development	541720	14	11	8	3 i	*	3
Other professional, scientific, and technical services	other 54	587	34	23	2 i	8	2 i
Health care services	621-23	573	7	3 i	1 i	3 i	2
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	2,907	35	20	1	11	4
All companies (number of domestic employees)	-	30,450	2,349	1,629	147	496	224
Small companies							
10-19 ^b	-	98	28	18	3	7	2
20-49	-	329	85	51	7	25	8
Medium companies							
50-99	-	400	80	45	6	26	9
100-249	-	962	129	76	8	38	15
Large companies							
250-499	-	954	116	74	7	31	11
500-999	-	1,151	120	81	7	24	15
1,000-4,999	-	4,380	411	290	24	83	38
5,000-9,999	-	3,313	310	194	17 i	85	31
10,000-24,999	-	5,124	367	262	29 i	69	36
25,000 or more	-	13,739	704	536	39	108	59

* = amount < 500; i = > 50% of the estimate is a combination of imputation and reweighting to account for nonresponse.

NAICS = 2012 North American Industry Classification System.

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

^b Business 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 R&D.

Source(s)

National Center for Science and Engineering Statistics and U.S. Census Bureau, Business Research and Development Survey, 2017.