

Table 49. Worldwide total employment, R&D employment, and level of education of researchers, by work activity, industry, and company size: 2024

(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	34,779		3,298		2,290	201 i	723	286
Manufacturing industries	31–33	17,769		1,598		1,160	127	275	163
Food	311	1,596		42		22	5 i	12	8
Beverage and tobacco products	312	1,038		11		6	*	2	4
Textile, apparel, and leather products	313–16	327		6		3	*	2	1
Wood products	321	173		5		2	*	2	1
Paper	322	322		7		5	*	2	1
Printing and related support activities	323	114		3		1	*	1	*
Petroleum and coal products	324	180		6		1	*	3	1
Chemicals	325	2,415		304		212	56	47	45
Basic chemicals	3251	320		28		19	3	8	1
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	159		10		7	2	3	1
Pesticide, fertilizer, and other agricultural chemicals	3253	112		4		3	2 i	1	1
Pharmaceuticals and medicines	3254	1,158		231		160	46	30	40
Soap, cleaning compound, and toilet preparations	3256	416		17		14	2	1	1
Paint, coating, adhesive, and other chemicals	3255, 3259	251		14		9	1 i	4	1
Plastics and rubber products	326	601		22		11	1	9	2
Nonmetallic mineral products	327	216		11		6 i	* i	2	3 r
Primary metals	331	240		10		5	1 i	3	2
Fabricated metal products	332	579		36		17	1	14	5
Machinery	333	1,943		166		115	9 i	39	12
Agricultural implement	33311	183		19		15	*	3	1
Semiconductor machinery	333242	126		31 i		23 i	5 i	7	1
Engine, turbine, and power transmission equipment	3336	365		30		23	1	5 i	2 i
Other machinery	other 333	1,269		86		55	3 i	23	8
Computer and electronic products	334	2,467		527		439	33 i	48	39
Communications equipment	3342	324		73		60	2 i	7	5
Semiconductor and other electronic components	3344	892		244		213	18 i	20	10
Navigational, measuring, electromedical, and control instruments	3345	588		88		60	6 i	15	13
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	76		11		8 i	2	2	1
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	160		36		22	1	4	9
Other measuring and controlling devices	other 3345	351		41		30	3 i	8	3
Other computer and electronic products	other 334	663		122		105	8 i	6 i	10
Electrical equipment, appliances, and components	335	589		39		27	3 i	7	5 i
Transportation equipment	336	3,236		277		209	8 i	45	23
Motor vehicles, bodies, trailers, and parts	3361–63	1,890		169		131 i	4 i	25	13 i
Aerospace products and parts	3364	1,088		91		70	4	14	7
Aircraft, aircraft engine, and aircraft parts	336411–13	D		D		47	4	12	D
Guided missile, space vehicle, and related parts	336414–15, 336419	D		D		23 i	* i	2	D

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						Total	With PhD				
Military armored vehicle, tank, and tank components	336992	3		*		*	*	*		*	
Other transportation	other 336	255		16		8	* i	5		3	
Furniture and related products	337	164		4		2	i	* i	2	*	i
Miscellaneous	339	1,570		124		77	9	35		11	
Medical equipment and supplies	3391	1,206		105		68	8	28		9	
Other miscellaneous manufacturing	3399	364		18		10	1 i	7		2	
Nonmanufacturing industries	21–23, 42–81	17,011		1,700		1,130	73 i	447		123	
Mining, quarrying, oil and gas extraction, and support activities	21	D		D		D	1	2		1	
Utilities	22	351		7		4	*	2		1	
Wholesale trade	42	555	i	24	i	10	i	1 i	9	i	5 i
Electronic shopping and electronic auctions	454111–12	D		D		D	1 i	7	i	1	i
Transportation and warehousing	48–49	1,388		36		17	i	1 i	16	i	4
Information	51	3,567		839		622	39 i	161		56	
Publishing	511	903		300		225	13 i	51		23	
Newspaper, periodical, book, and directory publishers	5111	20	i	5	i	2	i	* i	2	i	* i
Software publishers	5112	882		294		223	13 i	49		23	
Telecommunications	517	510		17		8	1 i	5		3	
Data processing, hosting, and related services	518	1,312		310		227	5 i	57		26	
Other information	other 51	842		212		161	20	48		4	
Finance and insurance	52	2,233		130		68	i	4 i	56	7	i
Real estate and rental and leasing	53	188		6		5	i	* i	1	*	
Lessors of nonfinancial intangible assets (except copyrighted works)	533	2		*		*	*	*	i	*	i
Other real estate and rental and leasing	other 53	186		6		5	i	* i	1	*	
Professional, scientific, and technical services	54	2,780		554		337	26 i	176		42	
Architectural, engineering, and related services	5413	513		71		50	2	17		4	
Computer systems design and related services	5415	963		175		118	10 i	41		15	
Scientific research and development services	5417	618		248		131	i	12	99	18	
Research and development in nanotechnology	541713	9		2		1	1	1		*	
Research and development in biotechnology (except nanobiotechnology)	541714	149		61		31	2	30		1	
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	449		177	i	98	i	8	68	11	
Research and development in the social sciences and humanities	541720	11		8		2	*	1		6	
Other professional, scientific, and technical services	other 54	686		61		38	i	3 i	18	i	5
Health care services	621–23	467		9		4	1	3		1	
	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81										
Other nonmanufacturing	81	3,353		45		25	* i	15		5	
All companies (number of domestic employees)	–	34,779		3,298		2,290	201 i	723		286	
Small companies											
10–19 ^b	–	103		36		25	4	7		3	
20–49	–	284		86		55	7	24		7	

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Medium companies										
50–99	–	405		103		61	7	32		10
100–249	–	841		158		96	11	48		14
Large companies										
250–499	–	1,015		154		102	8	36		16
500–999	–	1,490		166		112	10	38		16
1,000–4,999	–	5,294		611		396	32 i	157		58
5,000–9,999	–	3,318		307		184	17	94		30
10,000–24,999	–	6,202		599		419	39 i	133		47
25,000 or more	–	15,829		1,077		839	64 i	153 i		85

* = 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; r = relative standard error is more than 50%.

NAICS = 2017 North American Industry Classification System.

^a Researchers includes 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.

Source(s):

National Center for Science and Engineering Statistics and Census Bureau, Business Enterprise Research and Development Survey, 2024.