

TABLE 77. Worldwide R&D employment, by occupation, sex, industry, and company size: 2009
(Thousands of employees)

Industry and company size	NAICS code	Engineers and their managers			Scientists and their managers			Technicians and technologists			Support staff (clerical and others)		
		Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
All industries	21–23, 31–33, 42–81	1,097	923	173	236	146	90	318	230	87	228	116	112
Manufacturing industries	31–33	660	573	88	154	96	58	175	132	43	147	78	70
Food	311	6	4 i	2	10	6	4	7	4	3	7	4	3
Beverage and tobacco products	312	2 i	1 i	*	1	*	*	1 i	* i	* i	1 i	*	* i
Textiles, apparel, and leather products	313–316	2	1	*	*	* i	*	2	1	1	2	1	1
Wood products	321	1	1	*	*	*	*	1	*	*	1	1	*
Paper	322	5	4	1	4	3	1	2	2	1	1	1	*
Printing and related support activities	323	1	1	*	*	*	*	1	1	*	1	1	*
Petroleum and coal products	324	1	1	*	*	*	*	1	1	*	1	1	*
Chemicals	325	29	22	7	95	54	40	39	23	16	39	14	25
Basic chemicals	3251	4	3	1	6	5	1	5	4	1	2	1	1
Resin, synthetic rubber, fibers, and filaments	3252	2 i	2 i	* i	2	2	*	3	2	1	1	*	*
Pesticide, fertilizer, and other agricultural chemical	3253	*	*	*	3	2	1	2	1	1	1	*	1
Pharmaceuticals and medicines	3254	11	8	3	70	38	33	23	12	11	32	11	21
Soap, cleaning compound, and toilet preparation	3256	6	4	2	7	3	3	2	1	1	2	*	1
Paint, coating, adhesive, and other chemical	3255, 3259	6	5	1	6	4	1	4	3	1	2	1	1
Plastics and rubber products	326	13	12	1	5	4	1	8	6	1	5	3	2
Nonmetallic mineral products	327	2	2	*	1	1	*	2	1	*	2	1	*
Primary metals	331	3	3	*	*	*	*	2	2	*	2	2	*
Fabricated metal products	332	16	15	1	1	1	*	10	9	1	8	6	2
Machinery	333	60	54	5	2	2	*	13	13	1	7	5	2
Agricultural implements	33311	8	8	1	*	*	*	1	1	*	1	1	*
Semiconductor machinery	333295	6	6	1	*	*	*	1	1	*	1	*	*
Engine, turbine, and power transmission equipment	3336	4	4	*	*	*	*	2	1	*	1	1	*
Other machinery	other 333	41	37	4	1	1	* i	10	9	1	5	3	2
Computer and electronic products	334	292	252	40	12	9	3 i	38	30	8	29	14	15 i
Communications equipment	3342	80	69	11	* i	* i	* i	6 i	5 i	1 i	7	4	3
Semiconductor and other electronic components	3344	98	85	13	3	3	*	13	10	2	8	4	3
Navigational, measuring, electromedical, and control instruments	3345	67	58	9	7	5	2 i	16 i	12 i	4	11 i	4	7 i
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	16	14	2	2 i	1 i	1 i	4 i	3 i	1 i	3 i	1 i	2 i
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	33	29	4	1	1	*	8 i	6 i	1	6 i	2	4 i
Other measuring and controlling instruments	other 3345	18	15	2	3	2	1	4	3	1	2	1	1
Computer and peripheral equipment and other computer and electronic products	other 334	47	40	7 i	2	2 i	* i	3	2	1	4	2	2
Electrical equipment, appliances, and components	335	29 i	26 i	3 i	4 i	3 i	1 i	9 i	8 i	1 i	4 i	2 i	2 i
Transportation equipment	336	168	147	20	7	5	1	23 i	20 i	3 i	22 i	15 i	8 i
Automobiles, bodies, trailers, and parts	3361–3363	70	61 i	9 i	3 i	2 i	* i	10 i	8 i	1 i	5	3	1
Aerospace products and parts	3364	86	76	10	4	3	1	9	8	1	11 i	7 i	4 i

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		Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Aircraft, aircraft engine, and aircraft parts	336411–336413	78	68	10	3	2	1	8	7	1	11 i	7 i	4 i
Guided missile, space vehicle, and related parts	336414, 336415, 336419	8	7	1	*	*	*	*	*	*	*	*	*
Military armored vehicle, tank, and tank components	336992	*	*	*	*	*	0	*	*	*	*	*	*
Other transportation equipment	other 336	12 i	10 i	2 i	* i	* i	* i	5 i	4 i	1 i	6 i	4 i	2 i
Furniture and related products	337	3	2	*	*	*	*	1	1	*	1	1	*
Miscellaneous manufacturing	339	30	25	5	13 i	7 i	6 i	14	10	5	15	7	8
Medical equipment and supplies	3391	18	15	3	11 i	6 i	5 i	9	6	3 i	11	5	7 i
Other miscellaneous manufacturing	3399	11	10	1	2	1	*	6	4	2	4	2	1
Nonmanufacturing industries	21–23, 42–81	436	350	86	82	50	31	143	99	44	81	39	42
Mining, extraction, and support activities	21	7	6	1	1	1	*	2	1	*	1	1	1
Utilities	22	1	1	*	*	*	*	1	1	*	*	*	*
Construction	23	4 i	4 i	* i	*	*	*	*	*	*	*	*	*
Wholesale trade	42	3 i	3 i	1 i	1 i	1 i	* i	2 i	1 i	1 i	1 i	1 i	1 i
Retail trade	44, 45	4	3 i	1 i	* i	*	* i	*	*	*	*	*	*
Electronic shopping and mail-order houses	4541	4	3 i	1 i	*	*	*	*	*	*	*	*	*
Other retail trade	other 44, 45	*	*	*	* i	* i	* i	*	*	*	*	*	* i
Transportation and warehousing	48, 49	1	1	*	*	*	*	1	1	*	*	*	*
Information	51	233	183	50	9	7	2	29	22	7	23	16	7
Publishing	511	179	140	39	7	6	1	15	11	3	20	14	6
Newspaper, periodical, book, and directory publishers	5111	*	*	*	*	*	*	*	*	*	3	3	1
Software publishers	5112	179	140	39	7	6	1	14	11	3	16	11	5
Telecommunications	517	25 i	21 i	4 i	* i	* i	* i	2 i	1 i	* i	1 i	1 i	1 i
Data processing, hosting, and related services	518	20 i	16 i	5 i	1	1	*	5 i	3 i	2 i	1	1	*
Other information	other 51	9	7	2	*	*	*	8	6	2	1	1	1
Finance and insurance	52	13 i	10 i	4	1 i	* i	* i	11	6	5	2 i	1 i	1
Real estate and rental and leasing	53	1	1	*	*	*	*	*	*	*	*	*	*
Professional, scientific, and technical services	54	166	137	29	65	38	27	94	65	29	49	19	30
Architectural, engineering, and related services	5413	26	22	4	2	2	1	9	7	2	4	2	2
Computer systems design and related services	5415	91	76	15	6	5	2	49	39	10	8	4	4
Scientific R&D services	5417	21	16	5	33	18	15	27	11	15	25	8	17
Biotechnology R&D	541711	6	3	3	21	12	10	8	4	4	8	3	5
Physical, engineering, and life sciences (except biotechnology) R&D	541712	15	13	2	10	6	4	17	7	10	16	4	12
Social sciences and humanities R&D	541720	1 i	1 i	* i	2	1 i	1	1 i	* i	1	1 i	* i	1 i
Other professional, scientific, and technical services	other 54	28	23	5	23 i	14 i	10 i	10	7	2	11	5	7
Health care services	621–623	* i	* i	* i	2	1	1	1	* i	1	2 i	1	1 i
Other nonmanufacturing	55, 56, 61, 624, 71, 72, 81	2	2	* i	2	1	1	2 i	1	1 i	1	*	1

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		Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
All companies	-	1,097	923	173	236	146	90	318	230	87	228	116	112
Small companies (number of domestic employees) ^a													
5-499	-	257	225	32	70	45	25	109	85	25	68	38	29
5-99	-	157	139	18	47	30	17	68	54	15	41	23	18
5-49	-	103	92	10	27	18	9	49	38	11	30	17	13
5-24	-	62	56	6	14	10	4	28	21	7	18	10	8
25-49	-	41	36	5	13	8	5	21	17	4	12	7	5
50-99	-	54	47	8	21 i	12 i	8 i	19	15	4	11	7	5
100-249	-	55	47	7	10	7	3	25	19	6	15	10	6
250-499	-	46	39	6	12	8	5	16	12	4	11	5	6
Medium and large companies (number of domestic employees)													
500-999	-	46	39	7	12	8	4	17	12	5	10	5	5
1,000-4,999	-	183	152	31	35	22	13	44	30	14	35	18	17
5,000-9,999	-	91	74	17	17	10	7	32	21	11	29	13	16
10,000-24,999	-	165	141	24	51	30	22	40	30	10	35	14	21
25,000 or more	-	355	292	62	51	32	19	76	54	22	52 i	27 i	24 i

* = amount < 500 employees; i = more than 50% of value imputed.

NAICS = 2007 North American Industry Classification System.

^a Upper bound based on U.S. Small Business Administration's definition of small business; Business R&D and Innovation Survey (BRDIS) does not include companies with fewer than five domestic employees.

NOTES: Detail may not add to total because of rounding. Industry classification based on dominant business code for domestic R&D performance where available. For companies that did not report business codes, classification used for sampling was assigned. Statistics are representative of companies located in United States that performed or funded R&D.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics and U.S. Census Bureau, Business R&D and Innovation Survey, 2009.