

TABLE 59

Domestic full-time equivalent R&D employees and R&D scientists and engineers, by work status, industry, and company size: 2016

(Thousands)

Industry and company size	NAICS code	FTE R&D employees ^a						FTE R&D scientists and engineers ^b									
		Total	Full-time R&D employees	Full-time employees working on R&D part-time	Part-time employees working on R&D	Total	Full-time R&D employees	Full-time employees working on R&D part-time	Part-time employees working on R&D								
All industries	21-23, 31-33, 42-81	1,393	1,226	152	15	973	879	85	i	9							
Manufacturing industries	31-33	833	738	86	9	593	541	47		5							
Food	311	21	20	i	1	*	10	9	*	*	i						
Beverages and tobacco products	312	4	4		*	*	3	3	*	*							
Textiles, apparel, and leather products	313-16	8	5	i	2	i	*	i	4	i	3	i	1	i	*		
Wood products	321	2	1		*	*	1	1	*	*							
Paper	322	5	4		1	*	4	3	1	i	*						
Printing and related support activities	323	2	2	i	*	i	*	1	i	1	i	*	i	*	i		
Petroleum and coal products	324	2	2		*	*	1	1	*	*							
Chemicals	325	169	160		8	1	115	111	4		1						
Basic chemicals	3251	14	13		1	*	8	7	*	*	i						
Resins, synthetic rubber, and artificial synthetic fibers and filaments	3252	4	4		*	*	3	3	*	*							
Pesticides, fertilizers, and other agricultural chemicals	3253	5	i	4	i	1	i	*	2	i	2	*	i	*			
Pharmaceuticals and medicines	3254	122	115		6	1	83	80	3		*						
Soaps, cleaning compounds, and toilet preparations	3256	13	13		*	*	11	11	*	i	*						
Paints, coatings, adhesives, and other chemicals	3255, 3259	12	12		*	*	8	7	*	i	*						
Plastics and rubber products	326	25	20		5	*	12	10	2	i	*						
Nonmetallic mineral products	327	6	5	i	1	*	i	3	2	*	i	*					
Primary metals	331	5	2		3	*	2	1	1	i	*						
Fabricated metal products	332	23	13	i	9	i	*	11	i	7	i	3	i	*			
Machinery	333	67	55	i	12	*	48	i	41	i	7		*				
Agricultural implements	33311	8	8		*	*	6	6	*	*							
Semiconductor machinery	333242	9	i	8	i	*	*	i	8	i	7	i	*	i	*	i	
Engines, turbines, and power transmission equipment	3336	7	4		3	*	6	3	3		*						
Other machinery	other 333	43	35	i	8	i	*	i	29	i	24	i	5	i	*	i	
Computer and electronic products	334	250	229		18	4	204	187	14		3						
Communications equipment	3342	45	41		4	i	*	35	32	3	i	*					
Semiconductors and other electronic components	3344	92	87	i	3	i	3	79	i	75	i	2	i	2			
Navigational, measuring, electromedical, and control instruments	3345	65	54		11	1	51	41	9		*						
Electromedical, electrotherapeutic, and irradiation apparatuses	334510, 334517	12	i	11	i	*	i	*	i	9	i	8	i	*	i	*	i

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Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	28	18	10		*		22	14	8		*					
Other measuring and controlling devices	other 3345	26	25	1		*		20	19	1	i	*					
Other computer and electronic products	other 334	47	47	*		*		40	39	*	i	*	i				
Electrical equipment, appliances, and components	335	26	24	2		*		19	18	1	i	*					
Transportation equipment	336	152	134	16		1		110	101	8		1					
Automobiles, bodies, trailers, and parts	3361-63	88	80	7		1		69	65	4	i	*					
Aerospace products and parts	3364	51	43	8		1		34	30	4		*					
Aircraft, aircraft engines, and aircraft parts	336411-13	44	36	8		1		29	24	4		*					
Guided missiles, space vehicles, and related parts	336414-15, 336419	7	7	*		*		5	5	*		*					
Military armored vehicles, tanks, and tank components	336992	*	*	*		*		*	*	*		*					
Other transportation	other 336	13	11	i	2	i	*	7	i	7	i	1	i	*	i		
Furniture and related products	337	3	2	i	1	i	*	2	i	1	i	*	i	*			
Miscellaneous manufacturing	339	63	57	6	i	*		44	40	3	i	*					
Medical equipment and supplies	3391	44	41	3		*		32	30	2		*					
Other miscellaneous manufacturing	3399	19	i	16	i	3	i	*	i	12	i	10	i	2	i	*	i
Nonmanufacturing industries	21-23, 42-81	560	487	66		7		380	338	38	i	3					
Mining, extraction, and support activities	21	11	11	*		*		6	5	*		*					
Utilities	22	2	1	1		*		1	*	*		*	i				
Wholesale trade	42	9	6	i	3	i	*	i	4	i	3	i	1	i	*	i	
Electronic shopping and electronic auctions	454111-12	5	i	1	i	4	i	0	3	i	1	i	2	i	0		
Transportation and warehousing	48-49	3	i	2	i	*	i	0	1	1		*	i	0			
Information	51	267	243	22		2		205	192	12	i	1					
Publishing	511	137	133	3		1		115	113	2	i	*					
Newspaper, periodical, book, and directory publishers	5111	1	1	i	0		0	*	i	*	i	0		0			
Software publishers	5112	136	132	3		1		115	112	2	i	*					
Telecommunications	517	23	11	12		*		15	i	9		6	i	0			
Data processing, hosting, and related services	518	58	51	6	i	*		37	i	33		4	i	*			
Other information	other 51	48	48	*		*		38	37	*		*					
Finance and insurance	52	30	i	26	i	4		*	i	12	i	11	i	1	i	*	

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		Total	Full-time R&D employees	Full-time employees working on R&D part-time	Part-time employees working on R&D	Total	Full-time R&D employees	Full-time employees working on R&D part-time	Part-time employees working on R&D							
Real estate and rental and leasing	53	2	2	*	i	*	2	2	*	i	*					
Lessors of nonfinancial intangible assets (except copyrighted works)	533	*	*	0		0	*	*	0		0					
Other real estate and rental and leasing	other 53	2	2	*	i	*	2	2	*	i	*					
Professional, scientific, and technical services	54	215	183	28		5	138	117	19	i	2					
Architectural, engineering, and related services	5413	37	19	i	17	i	1	i	27	i	14	i	12	i	1	
Computer systems design and related services	5415	85	79		5		1		66	i	62	i	3	i	1	
Scientific research and development services	5417	71	66		3		2		31		28		2		1	
Biotechnology research and development	541711	20	20		1		*		8		7		*		*	
Physical, engineering, and life sciences (except biotechnology) research and development	541712	46	43		2		1		22		20		2		*	
Social sciences and humanities research and development	541720	5	i	3	i	*	i	1	i	1	1		*		*	
Other professional, scientific, and technical services	other 54	23	20	i	3		*		14	i	13	i	1		*	
Health care services	621-23	4	3	i	*		*	i	2	i	1	i	*	i	*	
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	12	8	i	3	i	*	i	6	i	4	i	2	i	*	i
All companies (number of domestic employees)	-	1,393	1,226		152		15		973		879		85	i	9	
Micro companies ^c																
5-9	-	12	11	i	1	i	*		9	i	9	i	1	i	*	
Small companies																
10-19	-	32	28	i	4	i	*		22	i	20	i	2	i	*	i
20-49	-	64	53	i	10	i	1		43	i	37	i	5	i	*	
Medium companies																
50-99	-	58	44	i	13	i	1		37	i	30	i	6	i	*	
100-249	-	84	67		16		1		56	i	47	i	8	i	*	i
Large companies																
250-499	-	65	53		12		1		44		37		6		*	
500-999	-	66	57		9		1		46		42		4	i	*	i
1,000-4,999	-	251	226		22		3		174		160		12		1	
5,000-9,999	-	150	133		16	i	1	i	112	i	101	i	10		1	i
10,000-24,999	-	234	219		12	i	4		152		144		6	i	3	

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25,000 or more	-	376	335	38	4	278	252	24	3

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

FTE = full-time equivalent; NAICS = 2012 North American Industry Classification System.

^a Includes scientists and engineers and their managers as well as technicians, technologists, and support staff.

^b Includes scientists and engineers and their managers.

^c Business R&D and Innovation Survey does not include companies with fewer than five 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 Science Foundation, National Center for Science and Engineering Statistics, and U.S. Census Bureau, Business R&D and Innovation Survey, 2016.