

TABLE 61

## Domestic full-time equivalent R&amp;D employees and researchers, by work status, industry, and company size: 2019

(Thousands)

Industry and company size	NAICS code	FTE R&D employees <sup>a</sup>				FTE R&D scientists and engineers <sup>b</sup>			
		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	1,677	1,384	277	17	1,147	989	150	8
Manufacturing industries	31-33	878	749	121	9	611	544	63	i 4
Food	311	19	16	3	*	11	10	1	i *
Beverage and tobacco products	312	5	3	1	*	3	2	*	*
Textile, apparel, and leather products	313-16	6	4	1	*	3	3	1	* i
Wood products	321	2	1	1	*	1	1	*	*
Paper	322	4	4	1	*	3	3	*	*
Printing and related support activities	323	3	2	1	*	2	1	1	i * i
Petroleum and coal products	324	6	6	*	*	1	1	*	*
Chemicals	325	181	172	8	1	124	119	4	1
Basic chemicals	3251	11	10	1	*	6	6	*	*
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	5	4	*	*	4	3	*	*
Pesticide, fertilizer, and other agricultural chemicals	3253	7	6	1	i *	4	4	*	i *
Pharmaceuticals and medicines	3254	138	132	5	1	94	91	3	*
Soap, cleaning compound, and toilet preparation	3256	11	10	1	*	8	8	*	i *
Paint, coating, adhesive, and other chemicals	3255, 3259	10	8	1	*	7	6	*	*
Plastics and rubber products	326	19	14	5	*	9	8	2	*
Nonmetallic mineral products	327	5	4	1	*	3	2	1	i * i
Primary metals	331	7	2	5	*	2	1	1	0
Fabricated metal products	332	24	11	12	*	11	7	5	* i
Machinery	333	82	57	24	2	57	41	15	1
Agricultural implement	33311	11	10	1	*	7	7	*	*
Semiconductor machinery	333242	12	10	2	*	9	8	1	i * i
Engine, turbine, and power transmission equipment	3336	7	6	1	*	5	4	*	* i
Other machinery	other 333	53	31	21	1	35	21	i 13	1
Computer and electronic products	334	252	227	23	2	202	186	16	i 1 i
Communications equipment	3342	40	38	1	i *	30	29	1	i * i
Semiconductor and other electronic components	3344	88	79	9	i *	76	70	6	i * i
Navigational, measuring, electromedical, and control instruments	3345	70	58	11	1	53	44	9	i * i
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	16	15	1	i *	12	11	i 1	i * 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					
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	31	22	8	1	25	i	18	7	i	*			
Other measuring and controlling device	other 3345	24	21	3	*	16		15	1		* i			
Other computer and electronic products	other 334	54	52	1	i	43		43	*	i	*			
Electrical equipment, appliances, and components	335	22	18	4	*	15		13	2	i	* i			
Transportation equipment	336	164	139	23	2	117		105	11		1			
Motor vehicles, bodies, trailers, and parts	3361-63	102	92	9	1	75		70	4		1			
Aerospace products and parts	3364	50	39	10	1	35		30	5		1 i			
Aircraft, aircraft engine, and aircraft parts	336411-13	46	37	8	1	33		28	4		1 i			
Guided missile, space vehicle, and related parts	336414-15, 336419	4	i	2	i	1	*	3	i	1	i	* i		
Military armored vehicle, tank, and tank component	336992	1	*	1	0	*		*	*		0			
Other transportation	other 336	11	i	8	i	3	i	6	4	1	i	* i		
Furniture and related products	337	3	2	1	*	2		1	*	i	*			
Miscellaneous	339	72	65	6	1	i	44	41	3	i	* i			
Medical equipment and supplies	3391	57	54	3	1	36		35	2		*			
Other miscellaneous manufacturing	3399	16	12	3	*	i	8	i	7	1	i	* i		
Nonmanufacturing industries	21-23, 42-81	799	635	156	8	536		444	87		4			
Mining, quarrying, oil and gas extraction, and support activities	21	11	10	1	*	7		6	*		*			
Utilities	22	1	*	*	*	*		*	*		*			
Wholesale trade	42	10	5	4	i	5		3	i	1	i	*		
Electronic shopping and electronic auctions	454111-12	38 - 64	13	25 - 52	*	17 - 58		4 - 14	8 - 44		* i			
Transportation and warehousing	48-49	15	i	12	i	3	i	11	i	10	i	1	i	* i
Information	51	352	323	27	i	1	260	245	14	i	1			
Publishing	511	107	102	4	1	85		83	2		* i			
Newspaper, periodical, book, and directory publishers	5111	1	*	*	i	*		*	*		0			
Software publishers	5112	106	102	4	1	85		83	2		* i			
Telecommunications	517	19	7	11	i	*	8	i	3	5	i	*		
Data processing, hosting, and related services	518	123	113	10	*	81		76	5		*			
Other information	other 51	103	101	2	*	85		84	1		*			
Finance and insurance	52	45	33	i	12	*	i	25	i	22	i	3	i	* 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	3	3	*	*	3	3	*	*	i
Lessors of nonfinancial intangible assets (except copyrighted works)	533	*	*	*	i	0	*	*	*	0
Other real estate and rental and leasing	other 53	3	3	*	*	3	3	*	*	i
Professional, scientific, and technical services	54	268	212	50	5	156	126	27	3	
Architectural, engineering, and related services	5413	41	18	21	2	27	13	13	1	
Computer systems design and related services	5415	91	78	12	2	67	61	6	i	1
Scientific research and development services	5417	95	89	4	2	41	39	2	1	
Research and development in biotechnology	541711	30	29	*	*	11	11	*	*	
Research and development in the physical, engineering, and life sciences (except biotechnology)	541712	56	52	3	1	28	i	26	i	1
Research and development in the social sciences and humanities	541720	9	i	8	i	*	i	2	i	2
Other professional, scientific, and technical services	other 54	41	i	27	i	13	i	*	i	19
Health care services	621-23	11	10	1	*	8	8	*	*	
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	15-40	12	2-28	*	3-40	3-13	i	0-28	*
All companies (number of domestic employees)	-	1,677	1,384	277	17	1,147	989	150	8	
Small companies										
10-19 <sup>c</sup>	-	32	25	7	1	23	20	3	*	
20-49	-	70	52	16	2	44	35	8	1	
Medium companies										
50-99	-	73	51	21	1	41	33	8	*	
100-249	-	104	73	30	2	64	50	13	1	
Large companies										
250-499	-	87	65	21	1	54	45	9	1	
500-999	-	87	72	14	1	53	48	5	*	
1,000-4,999	-	271	233	35	3	194	172	20	1	i
5,000-9,999	-	170	147	22	1	i	110	98	12	i
10,000-24,999	-	255	229	24	2	169	153	15	1	i
25,000 or more	-	527	438	86	3	393	336	56	2	

\* = amount < 500 employees; 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.

<sup>a</sup> Includes scientists and engineers and their managers, as well as technicians, technologists, and support staff.

<sup>b</sup> Includes scientists and engineers and their managers.

<sup>c</sup> 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. Beginning in survey year 2018, statistics are representative of companies located in the United States that performed or funded \$50,000 or more of R&D. This change has affected the comparability of these estimates 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, 2019.