

TABLE 44

Domestic R&D paid for by the U.S. federal government and performed by the company, by funding agency, industry, and company size: 2016

(Millions of U.S. dollars)

Industry and company size	NAICS code	Total	DOD	DOE	NASA	NIH	DHS	DOT	EPA	NSF	All other agencies
All industries	21-23, 31-33, 42-81	23,772	16,458	1,011 i	4,037 i	652	D	46	2	23	D
Manufacturing industries	31-33	19,217	14,106	476 i	3,556 i	78	D	9	*	3	D
Food	311	2	* i	1	* i	0	0	0	0	0	*
Beverages and tobacco products	312	0	0	0	0	0	0	0	0	0	0
Textiles, apparel, and leather products	313-16	5	3	0	2 i	0	0	0	0	0	0
Wood products	321	* i	0	*	0	* i	0	0	0	0	0
Paper	322	* i	* i	* i	0	* i	0	0	0	0	0
Printing and related support activities	323	* i	0	* i	0	* i	0	0	0	0	0
Petroleum and coal products	324	0	0	0	0	0	0	0	0	0	0
Chemicals	325	212	51	D	0	49	6	0	0	2	D
Basic chemicals	3251	46	0	46	0	0	0	0	0	0	1
Resins, synthetic rubber, and artificial synthetic fibers and filaments	3252	1 i	* i	1	0	* i	0	0	0	0	0
Pesticides, fertilizers, and other agricultural chemicals	3253	2	D	0	0	0	0	0	0	D	0
Pharmaceuticals and medicines	3254	147	44	D	0	49	6	0	0	D	D
Soaps, cleaning compounds, and toilet preparations	3256	*	*	0	0	0	0	0	0	0	0
Paints, coating, adhesives, and other chemicals	3255, 3259	16 i	D	10 i	0	0	0	0	0	0	D
Plastics and rubber products	326	4	0	4	0	0	0	0	0	*	*
Nonmetallic mineral products	327	6	2	3	0	0	0	1	0	0	*
Primary metals	331	6	3	4	0	0	0	0	0	0	0
Fabricated metal products	332	12	* i	1 i	11	* i	0	0	*	0	*
Machinery	333	152	97	52 i	1	0	0	2	0	*	1
Agricultural implements	33311	3	* i	2	0	0	0	0	0	*	*
Semiconductor machinery	333242	3	D	D	*	0	0	0	0	0	1
Engines, turbines, and power transmission equipment	3336	41 i	D	D	* i	0	0	*	0	0	0
Other machinery	other 333	106	91	13 i	*	0	0	2	0	0	0
Computer and electronic products	334	4,410	3,889	D	363 i	7 i	2	6	0	1	D
Communications equipment	3342	787 i	579 i	4 i	203 i	1 i	0	0	0	0	0
Semiconductors and other electronic components	3344	278	228	D	12 i	0	*	0	0	1	D
Navigational, measuring, electromedical, and control instruments	3345	3,320	3,056	22 i	148	6 i	1	6	0	*	80
Electromedical, electrotherapeutic, and irradiation apparatuses	334510, 334517	1 i	* i	0	* i	*	0	0	0	0	0
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	3,274	3,043	0	144	*	1	5	0	*	80
Other measuring and controlling devices	other 3345	45	13	22 i	3 i	6 i	0	1	0	0	*
Other computer and electronic products	other 334	26	25	1	* i	0	0	0	0	0	0
Electrical equipment, appliances, and components	335	46 i	5	27 i	7 i	7 i	*	0	0	0	0
Transportation equipment	336	14,325	10,043	D	3,171 i	3	D	*	0	0	D

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Automobiles, bodies, trailers, and parts	3361-63	D	9	D	0	0	D	*	0	0	0
Aerospace products and parts	3364	12,904	D	D	3,171 i	3	D	0	0	0	D
Aircraft, aircraft engines, and aircraft parts	336411-13	11,839	8,136	8	D	3	D	0	0	0	D
Guided missiles, space vehicles, and related parts	336414-15, 336419	1,065 i	D	D	D	0	0	0	0	0	0
Military armored vehicles, tanks, and tank components	336992	D	D	0	0	0	1	0	0	0	0
Other transportation	other 336	D	D	* i	* i	0	0	0	0	0	0
Furniture and related products	337	* i	* i	0	0	0	0	0	0	0	0
Miscellaneous	339	36	13	D	0	11 i	0	0	*	*	D
Medical equipment and supplies	3391	27	8	D	0	7	0	0	*	0	D
Other miscellaneous manufacturing	3399	10 i	5	0	0	4 i	0	0	0	*	0
Nonmanufacturing industries	21-23, 42-81	4,555	2,351	535 i	481 i	575	15	37	2	20	539
Mining, extraction, and support activities	21	2	0	2	0	0	0	0	0	0	0
Utilities	22	D	0	D	0	0	0	0	0	0	0
Wholesale trade	42	0	0	0	0	0	0	0	0	0	0
Electronic shopping and electronic auctions	454111-12	0	0	0	0	0	0	0	0	0	0
Transportation and warehousing	48-49	3	0	0	0	0	0	0	0	0	3
Information	51	25	11	D	D	1	0	1	0	*	D
Publishing	511	7	1	4	D	D	0	D	0	0	D
Newspaper, periodical, book, and directory publishers	5111	* i	0	* i	0	0	0	0	0	0	0
Software publishers	5112	7	1	4	D	D	0	D	0	0	D
Telecommunications	517	*	*	* i	* i	* i	0	0	0	0	0
Data processing, hosting, and related services	518	16	9	D	D	D	0	D	0	*	0
Other information	other 51	2	2	0	0	0	0	0	0	*	0
Finance and insurance	52	0	0	0	0	0	0	0	0	0	0
Real estate and rental and leasing	53	0	0	0	0	0	0	0	0	0	0
Lessors of nonfinancial intangible assets (except copyrighted works)	533	0	0	0	0	0	0	0	0	0	0
Other real estate and rental and leasing	other 53	0	0	0	0	0	0	0	0	0	0
Professional, scientific, and technical services	54	4,496	2,338	501 i	479 i	571	15	36	2	20	534
Architectural, engineering, and related services	5413	964	634	278 i	4 i	0	*	D	1	*	D
Computer systems design and related services	5415	583	392	110 i	21 i	56 i	1	3	0	*	*
Scientific research and development services	5417	2,675	1,216	105 i	339 i	479	13	D	1	18	D
Biotechnology research and development	541711	93	D	1	*	53	0	0	0	*	D
Physical, engineering, and life sciences (except biotechnology) research and development	541712	1,956	1,142	103 i	D	272 i	13	4	*	17	D
Social sciences and humanities research and development	541720	626	D	1	D	154	1	D	*	1	D

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Other professional, scientific, and technical services	other 54	274	95	8 i	116	36	1	* i	0	1	16
Health care services	621-23	2	0	0	0	2	0	0	0	0	* i
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	D	2	0	D	1	0	0	0	0	D
All companies (number of domestic employees)	-	23,772	16,458	1,011 i	4,037 i	652	D	46	2	23	D
Micro companies ^a											
5-9	-	263 i	30	63 i	65 i	79 i	*	0	0	11	14
Small companies											
10-19	-	393 i	126	95 i	75 i	68 i	2	6	*	4	16
20-49	-	899	572	131 i	D	101 i	2	6	*	2	D
Medium companies											
50-99	-	451	207	47 i	81 i	67 i	2	3	*	4	40
100-249	-	839	533	76 i	80 i	104	D	3	*	*	D
Large companies											
250-499	-	462	246	D	128	35	2	1	0	0	D
500-999	-	258	181	1 i	*	35	*	*	0	0	41
1,000-4,999	-	1,134	382	D	120 i	D	D	D	1	1	D
5,000-9,999	-	1,132 i	915 i	135 i	D	* i	0	0	0	0	D
10,000-24,999	-	3,994	3,182	46 i	710	12 i	0	D	1	0	D
25,000 or more	-	13,948 i	10,084	D	2,662 i	D	D	D	0	*	D

* = amount < \$500,000; D = data withheld to avoid disclosing operations of individual companies; i = > 50% of the estimate is a combination of imputation and reweighting to account for nonresponse.

DHS = Department of Homeland Security, DOD = Department of Defense, DOE = Department of Energy, DOT = Department of Transportation, EPA = Environmental Protection Agency, NAICS = 2012 North American Industry Classification System, NASA = National Aeronautics and Space Administration, NIH = National Institutes of Health, NSF = National Science Foundation.

^a 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.