

TABLE 46

Domestic R&D paid for by the U.S. federal government and performed by the company, by funding agency, industry, and company size: 2019

(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	21,941	15,141	519	4,534	519	124	30	1	8	1,064
Manufacturing industries	31-33	16,023	11,174	266	3,905	84	96	7	1	1	489
Food	311	*	0	*	0	0	0	0	0	0	0
Beverage and tobacco products	312	0	0	0	0	0	0	0	0	0	0
Textile, apparel, and leather products	313-16	7	3	0	4	0	0	0	0	0	0
Wood products	321	0	0	0	0	0	0	0	0	0	0
Paper	322	*	0	*	0	*	0	0	0	0	0
Printing and related support activities	323	0	0	0	0	0	0	0	0	0	0
Petroleum and coal products	324	*	0	*	0	0	0	0	0	0	0
Chemicals	325	289	61	10	*	63	82	0	0	0	74
Basic chemicals	3251	2	0	0-3	0	0-3	0	0	0	0	0
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	*	0	0-1	0	0-1	0	0	0	0	0
Pesticide, fertilizer, and other agricultural chemicals	3253	0-8	0	0-4	0	0-8	0	0	0	0	0
Pharmaceuticals and medicines	3254	269	49	7	0	54-64	82	0	0	0	65-75
Soap, cleaning compound, and toilet preparation	3256	*	0	0-1	0	0-1	0	0	0	0	0
Paint, coating, adhesive, and other chemicals	3255, 3259	11-20	12	0-4	*	0-8	0	0	0	0	0-8
Plastics and rubber products	326	*	*	0	0	*	0	0	0	0	0
Nonmetallic mineral products	327	2	2	*	*	*	0	0	0	0	0
Primary metals	331	2	*	1	*	0	0	0	0	0	0
Fabricated metal products	332	4	3	*	1	*	0	0	0	0	0
Machinery	333	193	105	87	1	0	0	0	0	0	0
Agricultural implement	33311	1	0	1	0	0	0	0	0	0	0
Semiconductor machinery	333242	*	0	*	0	0	0	0	0	0	0
Engine, turbine, and power transmission equipment	3336	155	89	65	0	0	0	0	0	0	0
Other machinery	other 333	37	15	21	1	0	0	0	0	0	0
Computer and electronic products	334	5,802	5,019	73	275	13	2	7	0	1	411
Communications equipment	3342	320-453	188-329	1	0-130	*	0	0	0	0	0-133
Semiconductor and other electronic components	3344	468	85	26	0-130	*	0	0	0	0	225-358
Navigational, measuring, electromedical, and control instruments	3345	4,852	4,607	27	146	8	2	7	0	*	54
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	11	3	1	3	3	0	0	0	*	0
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	4,813	4,586	22	141	0	2	7	0	0	54
Other measuring and controlling device	other 3345	28	18	4	1	5	0	0	0	0	0

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Other computer and electronic products	other 334	31 - 161	0 - 138	19	0 - 130	i 5	0	*	0	1	0 - 133
Electrical equipment, appliances, and components	335	27	17	5	4	0	0	0	0	0	1
Transportation equipment	336	9,652	i 5,944	i 74	3,619	i 0	12	*	1	0	1
Motor vehicles, bodies, trailers, and parts	3361-63	38 - 481	0 - 469	0 - 74	0	0	12	*	1	0	0
Aerospace products and parts	3364	8,454	i 4,758 - 4,835	i 0 - 74	3,619	i 0	0	0	0	0	1
Aircraft, aircraft engine, and aircraft parts	336411-13	7,558	i 4,577	i 0	2,980	i 0	0	0	0	0	1
Guided missile, space vehicle, and related parts	336414-15, 336419	896	182 - 258	0 - 74	639	0	0	0	0	0	0
Military armored vehicle, tank, and tank component	336992	0 - 11	0 - 11	*	0	0	0	0	*	0	0
Other transportation	other 336	706 - 1,160	705 - 1,159	1	i 0	0	0	0	0	0	0
Furniture and related products	337	0 - 3	i 0	0 - 2	i 1	i *	i 0	0	0	0	0
Miscellaneous	339	36 - 48	20	8 - 20	*	i 8	i 0	0	0	0	2
Medical equipment and supplies	3391	25	11	5	i *	i 8	i 0	0	0	0	2
Other miscellaneous manufacturing	3399	11 - 24	9	2 - 15	*	0	0	0	0	0	0
Nonmanufacturing industries	21-23, 42-81	5,918	3,968	253	629	435	29	22	1	7	575
Mining, quarrying, oil and gas extraction, and support activities	21	1	*	i 1	0	0	0	0	0	0	0
Utilities	22	27 - 34	0	27 - 34	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 - 8	i 0	0	0	0 - 8	i 0	0	0	0	0
Transportation and warehousing	48-49	2	0	0	2	0	0	0	0	0	0
Information	51	185	134	21 - 28	1	6 - 14	4	*	0	0	3 - 11
Publishing	511	57	26	18	*	0 - 8	0	*	0	0	3 - 11
Newspaper, periodical, book, and directory publishers	5111	*	i 0	*	i 0	0	0	0	0	0	0
Software publishers	5112	57	26	18	*	0 - 8	0	*	0	0	3 - 11
Telecommunications	517	4	i 1	1	i 0	1	i 0	0	0	0	0
Data processing, hosting, and related services	518	116	106	0	0	6	4	0	0	0	*
Other information	other 51	8	i 0	1 - 8	i *	i 0 - 7	i 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	5,685	3,824	195	626	421	24	22	1	7	565

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Architectural, engineering, and related services	5413	1,214	1,027	76 i	79	0	0	11	0	0	21
Computer systems design and related services	5415	454	405	27	14 i	3 i	2	3	0	*	*
Scientific research and development services	5417	3,343	1,870	90	413	415	18	6	1	4	527
Research and development in biotechnology	541711	108	39	12	*	54	0	0	0	1	1
Research and development in the physical, engineering, and life sciences (except biotechnology)	541712	2,571	1,747	77	412	186	18	1	1	3	126
Research and development in the social sciences and humanities	541720	664	83	0	1 i	176	0	5	0	0	400
Other professional, scientific, and technical services	other 54	674	523	2	121	3 i	4	2	*	2	17
Health care services	621-23	2	0	0	0	2	0	0	0	0	0
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	9 - 19	10	* i	* i	* i	0	0	0	0	0 - 8
All companies (number of domestic employees)	-	21,941	15,141	519	4,534 i	519	124	30	1	8	1,064
Small companies											
10-19 ^a	-	502	231	57 i	91 i	107	2	4	*	2	9
20-49	-	811	528	79 i	99	57	2	9	*	1	37
Medium companies											
50-99	-	697	559	32	22	24	1	*	*	3	56
100-249	-	988	753	42	80	38	17	4	0	1	53
Large companies											
250-499	-	1,393	629	12	271	78	*	0	0	0	402
500-999	-	248 i	137 i	14 i	57 i	30 i	4	0	0	0	6
1,000-4,999	-	1,710	740	15	688	157	0	0	0	0	110
5,000-9,999	-	977	315	134	178 i	19	0	5	0	0	325
10,000-24,999	-	1,717 i	1,629 i	70	9 i	5	0	1	1	1	4
25,000 or more	-	12,897 i	9,620	65	3,040 i	5	98	7	0	0	63

* = amount < \$500,000; 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 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.