

TABLE 39

Domestic R&D paid for by the U.S. federal government and performed by the company, by type of R&D, industry, and company size: 2021

(Millions of U.S. dollars)

Industry and company size	NAICS code	Total	Basic research	Applied research	Development
All industries	21-23, 31-33, 42-81	23,582	2,344 i	3,250	17,987
Manufacturing industries	31-33	16,374	1,181 i	1,652 i	13,541
Food	311	0	0	0	0
Beverage and tobacco products	312	0	0	0	0
Textile, apparel, and leather products	313-16	1	0	1 i	0
Wood products	321	0	0	0	0
Paper	322	0	0	0	0
Printing and related support activities	323	0	0	0	0
Petroleum and coal products	324	0	0	0	0
Chemicals	325	1,223	41	135	1,047
Basic chemicals	3251	6	* i	0-7 i	0-7
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	3-23	* i	0-8 i	0-14
Pesticide, fertilizer, and other agricultural chemicals	3253	0	0	0	0
Pharmaceuticals and medicines	3254	1,194	41	119	1,034
Soap, cleaning compound, and toilet preparations	3256	0	0	0	0
Paint, coating, adhesive, and other chemicals	3255, 3259	1-21	1	0-17	0-14
Plastics and rubber products	326	3 r	0	0	3 r
Nonmetallic mineral products	327	4	1	2	1
Primary metals	331	*	* i	0	*
Fabricated metal products	332	13	0	1 i	13
Machinery	333	503	6	35	463
Agricultural implement	33311	0-6	0-6	0	0
Semiconductor machinery	333242	14	0	0	14
Engine, turbine, and power transmission equipment	3336	93	0-6	22-28	64
Other machinery	other 333	391-397	0-6	7-13	384
Computer and electronic products	334	2,828	30 i	486	2,312
Communications equipment	3342	421-504 i	0-11 i	90 i	332-403 i
Semiconductor and other electronic components	3344	81	5 i	6 i	70
Navigational, measuring, electromedical, and control instruments	3345	2,223	9	373	1,841
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	3-17	0	0-14 i	3
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	2,086-2,197	0-10	312-374	1,771-1,839
Other measuring and controlling devices	other 3345	23-121	0-10 i	0-46	0-66

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Other computer and electronic products	other 334	19 - 102	4 - 18	16	0 - 68 i
Electrical equipment, appliances, and components	335	25	*	2	23
Transportation equipment	336	11,670 i	1,100 i	976 i	9,594 i
Motor vehicles, bodies, trailers, and parts	3361-63	48	1	30	17 i
Aerospace products and parts	3364	10,527 i	1,099 i	838 i	8,591 i
Aircraft, aircraft engine, and aircraft parts	336411-13	9,719 i	1,088 i	811 i	7,820 i
Guided missile, space vehicle, and related parts	336414-15, 336419	808	11	26	771
Military armored vehicle, tank, and tank components	336992	1	0	0	1 i
Other transportation	other 336	1,094	0	109	986
Furniture and related products	337	0	0	0	0
Miscellaneous	339	102	3	14	85
Medical equipment and supplies	3391	72	2	11	59
Other miscellaneous manufacturing	3399	30	1	3	27
Nonmanufacturing industries	21-23, 42-81	7,207	1,163	1,598	4,446
Mining, quarrying, oil and gas extraction, and support activities	21	0	0	0	0
Utilities	22	28 i	*	5 i	23 i
Wholesale trade	42	0	0	0	0
Electronic shopping and electronic auctions	454111-12	0	0	0	0
Transportation and warehousing	48-49	0	0	0	0
Information	51	377	9 r	41	327
Publishing	511	36 r	* i	5	31 r
Newspaper, periodical, book, and directory publishers	5111	23 r	0	0	23 r
Software publishers	5112	13	* i	5	8
Telecommunications	517	3	*	* i	3
Data processing, hosting, and related services	518	338	9 r	36	293
Other information	other 51	0	0	0	0
Finance and insurance	52	0	0	0	0
Real estate and rental and leasing	53	0	0	0	0
Lessors of nonfinancial intangible assets (except copyrighted works)	533	0	0	0	0
Other real estate and rental and leasing	other 53	0	0	0	0
Professional, scientific, and technical services	54	6,790	1,154	1,552	4,084
Architectural, engineering, and related services	5413	1,318	77	193	1,049
Computer systems design and related services	5415	569	57 i	169 i	343 i
Scientific research and development services	5417	4,106	986	1,141	1,978
Research and development in nanotechnology	541713	47 i	6 i	17	25 i

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Research and development in biotechnology (except nanobiotechnology)	541714	78	20	24 i	34 i
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	3,476	500 i	1,095	1,882
Research and development in the social sciences and humanities	541720	504	461	6 i	37
Other professional, scientific, and technical services	other 54	797	34	49	714
Health care services	621-23	10	0	* i	9
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	3	* r	* r	2
All companies (number of domestic employees)	-	23,582	2,344 i	3,250	17,987
Small companies					
10-19 ^a	-	444	33 i	113 i	299
20-49	-	912	43	196	673
Medium companies					
50-99	-	694	74 i	188	432
100-249	-	1,421	166	335	921
Large companies					
250-499	-	1,065	78	390	597
500-999	-	1,271	336 i	191	744 i
1,000-4,999	-	2,137	39	303	1,795
5,000-9,999	-	1,107	441	53 i	613
10,000-24,999	-	2,961	27	252	2,683
25,000 or more	-	11,570	i 1,108 i	1,231 i	9,230 i

* = amount < \$500,000; i = more than 50% of the estimate is a combination of imputation and reweighting to account for nonresponse; r = relative standard error is more than 50%.

NAICS = 2017 North American Industry Classification System.

^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. Statistics are representative of companies located in the United States that performed or funded \$50,000 or more of R&D and are not comparable 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, 2021.