

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: 2022

(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	31,626	2,438	5,461	23,727
Manufacturing industries	31-33	24,082	1,426	3,524	19,132
Food	311	0	0	0	0
Beverage and tobacco products	312	0	0	0	0
Textile, apparel, and leather products	313-16	5	D	3	D
Wood products	321	*	0	*	*
Paper	322	0	0	0	0
Printing and related support activities	323	0	0	0	0
Petroleum and coal products	324	*	D	*	D
Chemicals	325	766	19	93	655
Basic chemicals	3251	D	D	12	20
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	D	D	D	2
Pesticide, fertilizer, and other agricultural chemicals	3253	0	0	0	0
Pharmaceuticals and medicines	3254	703	8	69	626
Soap, cleaning compound, and toilet preparations	3256	0	0	0	0
Paint, coating, adhesive, and other chemicals	3255, 3259	19	D	D	6
Plastics and rubber products	326	25	1	*	24
Nonmetallic mineral products	327	3	0	*	2
Primary metals	331	*	*	0	0
Fabricated metal products	332	16	1	*	15
Machinery	333	673	13	66	594
Agricultural implement	33311	D	D	D	*
Semiconductor machinery	333242	14	0	0	14
Engine, turbine, and power transmission equipment	3336	235	5	61	169
Other machinery	other 333	D	D	D	411
Computer and electronic products	334	2,560	46	375	2,139
Communications equipment	3342	205	D	D	145
Semiconductor and other electronic components	3344	71	4	2	65
Navigational, measuring, electromedical, and control instruments	3345	2,246	2	324	1,920
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	402	2	31	370
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	1,824	*	292	1,531
Other measuring and controlling devices	other 3345	20	*	1	19
Other computer and electronic products	other 334	38	D	D	9
Electrical equipment, appliances, and components	335	21	*	2	19
Transportation equipment	336	19,934	1,338	2,968	15,628
Motor vehicles, bodies, trailers, and parts	3361-63	D	1	D	D

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Aerospace products and parts	3364	18,855	i	1,337	i	2,847	i	14,671
Aircraft, aircraft engine, and aircraft parts	336411-13	14,298	i	D		D		11,149
Guided missile, space vehicle, and related parts	336414-15, 336419	4,557		D		D		3,522
Military armored vehicle, tank, and tank components	336992	1		0		0		1
Other transportation	other 336	D		0		D		D
Furniture and related products	337	0		0		0		0
Miscellaneous	339	77		6		16		55
Medical equipment and supplies	3391	58		6		15		37
Other miscellaneous manufacturing	3399	19		0		1		18
Nonmanufacturing industries	21-23, 42-81	7,544		1,012	i	1,936		4,596
Mining, quarrying, oil and gas extraction, and support activities	21	0		0		0		0
Utilities	22	D		0		6		D
Wholesale trade	42	1	r	0		*	r	*
Electronic shopping and electronic auctions	454111-12	0		0		0		0
Transportation and warehousing	48-49	D		0		0		D
Information	51	176		4	r	58	i	113
Publishing	511	102	r	*	r	34	r	68
Newspaper, periodical, book, and directory publishers	5111	0		0		0		0
Software publishers	5112	102	r	*	r	34	r	68
Telecommunications	517	41	r	*	i	23	r	17
Data processing, hosting, and related services	518	33		4	r	*	i	28
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	7,273		1,006	i	1,868		4,400
Architectural, engineering, and related services	5413	475		41		176		257
Computer systems design and related services	5415	897		46		228		622
Scientific research and development services	5417	5,084		897	i	1,443		2,743
Research and development in nanotechnology	541713	71		8		43	r	19
Research and development in biotechnology (except nanobiotechnology)	541714	701		39		206		456
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	3,700		275		1,190		2,236
Research and development in the social sciences and humanities	541720	612		575	i	4	i	33
Other professional, scientific, and technical services	other 54	818		22		20		776
Health care services	621-23	D		D		D		16

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Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	1	D	D	D		
All companies (number of domestic employees)	–	31,626	2,438	i	5,461	23,727	
Small companies							
10–19 ^a	–	495	29		117	i	349
20–49	–	741	58		142		542
Medium companies							
50–99	–	746	39		257		451
100–249	–	1,402	105		312		986
Large companies							
250–499	–	687	32		223		432
500–999	–	679	31		158		490
1,000–4,999	–	1,672	152		493		1,026
5,000–9,999	–	2,573	602	i	206		1,765
10,000–24,999	–	1,960	38		363		1,560
25,000 or more	–	20,670	1,352	i	3,189	i	16,129

* = amount < \$500,000; D = data withheld to avoid disclosing operations of individual companies; 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.

Source(s):

National Center for Science and Engineering Statistics and Census Bureau, Business Enterprise Research and Development Survey, 2022.