Table 38. 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: 2024

(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	30,995		2,204	i	6,132		22,658	
Manufacturing industries	31–33	23,361		1,258	i	4,433	i	17,670	
Food	311	1		0		*	i	1	i
Beverage and tobacco products	312	*		0		*	i	0	
Textile, apparel, and leather products	313–16	0		0		0		0	
Wood products	321	*		*		0		0	
Paper	322	0		0		0		0	
Printing and related support activities	323	0		0		0		0	
Petroleum and coal products	324	1		1	i	0		*	i
Chemicals	325	684		67	i	166	i	450	
Basic chemicals	3251	72		15		17		39	
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	0		0		0		0	
Pesticide, fertilizer, and other agricultural chemicals	3253	D		0		0		D	
Pharmaceuticals and medicines	3254	587	i	51	i	132	i	404	
Soap, cleaning compound, and toilet preparations	3256	0		0		0		0	
Paint, coating, adhesive, and other chemicals	3255, 3259	D		1	i	17		D	
Plastics and rubber products	326	2		0		0		2	
Nonmetallic mineral products	327	2		*	r	1		1	
Primary metals	331	6		*		2		3	
Fabricated metal products	332	5	r	0		0		5	r
Machinery	333	161		9		54	i	99	
Agricultural implement	33311	2	r	0		*		2	r
Semiconductor machinery	333242	D		0		0		D	
Engine, turbine, and power transmission equipment	3336	D		6		D		71	
Other machinery	other 333	33		2	r	D		D	
Computer and electronic products	334	3,380		69	i	672		2,639	
Communications equipment	3342	D		50	i	D		D	
Semiconductor and other electronic components	3344	243		2		19		222	
Navigational, measuring, electromedical, and control instruments	3345	2,897		15	i	632		2,250	
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	37	r	0		16	r	21	r
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	2,765		12	i	609		2,144	
Other measuring and controlling devices	other 3345	94	r	3	r	7		84	r
Other computer and electronic products	other 334	D		3	r	D		D	
Electrical equipment, appliances, and components	335	62		7		10		44	
Transportation equipment	336	18,950	i	1,104	i	3,488	i	14,358	i
Motor vehicles, bodies, trailers, and parts	3361–63	D		0		D		D	
Aerospace products and parts	3364	17,217	i	1,104	i	3,319	i	12,794	i
Aircraft, aircraft engine, and aircraft parts	336411–13	13,802	i	1,090	i	D		D	
Guided missile, space vehicle, and related parts	336414–15, 336419	3,414		14		D		D	
Military armored vehicle, tank, and tank components	336992	D		0		0		D	
Other transportation	other 336	D		0		D		D	
Furniture and related products	337	0		0		0		0	
Miscellaneous	339	107		1		39		67	
Medical equipment and supplies	3391	98		1		39		58	
Other miscellaneous manufacturing	3399	9		0		0		9	
Nonmanufacturing industries	21–23, 42–81	7,634		947		1,699		4,988	
Mining, quarrying, oil and gas extraction, and support activities	21	*		0		*	i	0	
Utilities	22	D		0		0		D	
Wholesale trade	42	D		0		0		D	
Electronic shopping and electronic auctions	454111–12	0		0		0		0	

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(Millions of U.S. dollars)

Industry and company size	NAICS code	Total		Basic research		Applied research		Development	
Transportation and warehousing	48–49	D		0		0		D	
Information	51	60		1		D		D	
Publishing	511	3		0		D		D	
Newspaper, periodical, book, and directory publishers	5111	0		0		0		0	
Software publishers	5112	3		0		D		D	
Telecommunications	517	3		0		0		3	
Data processing, hosting, and related services	518	53		1		4		48	
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	7,297		945		1,690		4,662	
Architectural, engineering, and related services	5413	404		22		84		298	
Computer systems design and related services	5415	1,115		58	r	221		836	
Scientific research and development services	5417	4,933		839		1,350		2,743	
Research and development in nanotechnology	541713	75		*	i	8		67	
Research and development in biotechnology (except nanobiotechnology)	541714	641		44	i	187	i	410	i
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	3,542		170		1,129		2,243	
Research and development in the social sciences and humanities	541720	675		626		26		23	
Other professional, scientific, and technical services	other 54	844		25		35		784	
Health care services	621–23	*		0		*	i	0	
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	D		0		D		D	
All companies (number of domestic employees)	–	30,995		2,204	i	6,132		22,658	
Small companies									
10–19[a]	–	486		31		145		310	
20–49	–	808		83	i	155		570	
Medium companies									
50–99	–	703		35		99		569	
100–249	–	1,089		51		315		723	
Large companies									
250–499	–	878		25		259		594	
500–999	–	853		34		283		536	
1,000–4,999	–	1,579		116	i	287		1,176	
5,000–9,999	–	1,150		620		39		492	
10,000–24,999	–	2,108		96	i	453	i	1,558	
25,000 or more	–	21,340	i	1,113	i	4,098	i	16,130	

* = 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.

Source(s):
National Center for Science and Engineering Statistics and Census Bureau, Business Enterprise Research and Development Survey, 2024.