Table 67. Domestic R&D paid for by others and performed by the company, depreciation, capital expenditures, and adjusted domestic R&D, by industry and company size: 2024

(Millions of U.S. dollars and percent change)

Industry and company size	NAICS code	Domestic R&D paid for by others and performed by the company	Depreciation	Capital expenditures related to R&D[a]	Adjusted domestic R&D paid for by others and performed by the company	Change	
						Amount	Percent
All industries	21–23, 31–33, 42–81	85,711	2,608	0	83,103	-2,608	-3.0
Manufacturing industries	31–33	48,661	1,190	0	47,471	-1,190	-2.4
Food	311	268	8	0	260	-8	-3.1
Beverage and tobacco products	312	*	*	0	0	*	-100.0
Textile, apparel, and leather products	313–16	6	0	0	6	0	0.0
Wood products	321	6	*	0	6	*	-0.7
Paper	322	1	0	0	1	0	0.0
Printing and related support activities	323	2	*	0	2	*	-0.3
Petroleum and coal products	324	2	0	0	2	0	0.0
Chemicals	325	11,954	459	0	11,495	-459	-3.8
Basic chemicals	3251	237	16	0	221	-16	-6.9
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	D	D	0	D	D	D
Pesticide, fertilizer, and other agricultural chemicals	3253	D	D	0	D	D	D
Pharmaceuticals and medicines	3254	10,971	393	0	10,578	-393	-3.6
Soap, cleaning compound, and toilet preparations	3256	272	11	0	261	-11	-4.0
Paint, coating, adhesive, and other chemicals	3255, 3259	D	D	0	D	D	D
Plastics and rubber products	326	141	8	0	133	-8	-5.7
Nonmetallic mineral products	327	22	1	0	21	-1	-4.7
Primary metals	331	45	*	0	45	*	-0.1
Fabricated metal products	332	93	1	0	92	-1	-0.8
Machinery	333	2,191	103	0	2,088	-103	-4.7
Agricultural implement	33311	D	D	0	D	D	D
Semiconductor machinery	333242	D	D	0	D	D	D
Engine, turbine, and power transmission equipment	3336	D	D	0	D	D	D
Other machinery	other 333	333	10	0	323	-10	-3.1
Computer and electronic products	334	8,561	270	0	8,291	-270	-3.2
Communications equipment	3342	771 i	3 i	0	767 i	-3 i	-0.4
Semiconductor and other electronic components	3344	3,812	155	0	3,657	-155	-4.1
Navigational, measuring, electromedical, and control instruments	3345	3,347	94	0	3,253	-94	-2.8
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	199	3	0	196	-3	-1.3
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	2,971	90	0	2,881	-90	-3.0
Other measuring and controlling devices	other 3345	177	1	0	175	-1	-0.7
Other computer and electronic products	other 334	631	17	0	614	-17	-2.7
Electrical equipment, appliances, and components	335	864	14	0	850	-14	-1.6
Transportation equipment	336	24,192	321	0	23,871 i	-321	-1.3
Motor vehicles, bodies, trailers, and parts	3361–63	D	D	0	1,666	D	D
Aerospace products and parts	3364	20,774 i	229	0	20,544 i	-229	-1.1

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(Millions of U.S. dollars and percent change)

Industry and company size	NAICS code	Domestic R&D paid for by others and performed by the company	Depreciation	Capital expenditures related to R&D[a]	Adjusted domestic R&D paid for by others and performed by the company	Change	
						Amount	Percent
Aircraft, aircraft engine, and aircraft parts	336411–13	D	D	0	14,948 i	D	D
Guided missile, space vehicle, and related parts	336414–15, 336419	D	D	0	5,597	D	D
Military armored vehicle, tank, and tank components	336992	10	*	0	10	*	-0.1
Other transportation	other 336	D	D	0	1,651 i	D	D
Furniture and related products	337	0	0	0	0	0	NA
Miscellaneous	339	312	4	0	308	-4	-1.2
Medical equipment and supplies	3391	285	3	0	282	-3	-1.1
Other miscellaneous manufacturing	3399	27	1	0	26	-1	-2.3
Nonmanufacturing industries	21–23, 42–81	37,050	1,418	0	35,632	-1,418	-3.8
Mining, quarrying, oil and gas extraction, and support activities	21	638 i	87 i	0	552 i	-87 i	-13.6
Utilities	22	D	0	0	D	0	D
Wholesale trade	42	D	D	0	D	D	D
Electronic shopping and electronic auctions	454111–12	0	0	0	0	0	NA
Transportation and warehousing	48–49	D	D	0	D	D	D
Information	51	1,322	6	0	1,315	-6	-0.5
Publishing	511	511	3	0	509	-3	-0.5
Newspaper, periodical, book, and directory publishers	5111	0	0	0	0	0	NA
Software publishers	5112	511	3	0	509	-3	-0.5
Telecommunications	517	D	D	0	D	D	D
Data processing, hosting, and related services	518	755	D	0	D	D	D
Other information	other 51	D	D	0	D	D	D
Finance and insurance	52	101	0	0	101	0	0.0
Real estate and rental and leasing	53	0	0	0	0	0	NA
Lessors of nonfinancial intangible assets (except copyrighted works)	533	0	0	0	0	0	NA
Other real estate and rental and leasing	other 53	0	0	0	0	0	NA
Professional, scientific, and technical services	54	34,415	1,317	0	33,098	-1,317	-3.8
Architectural, engineering, and related services	5413	654	3	0	651	-3	-0.5
Computer systems design and related services	5415	4,411	74	0	4,336	-74	-1.7
Scientific research and development services	5417	28,237	1,237	0	27,000	-1,237	-4.4
Research and development in nanotechnology	541713	115	*	0	114	*	-0.3
Research and development in biotechnology (except nanobiotechnology)	541714	5,547	184	0	5,363	-184	-3.3
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	21,872 i	1,048	0	20,824 i	-1,048	-4.8
Research and development in the social sciences and humanities	541720	704	4	0	699	-4	-0.6
Other professional, scientific, and technical services	other 54	1,113	2	0	1,111	-2	-0.2
Health care services	621–23	131	D	0	D	D	D

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(Millions of U.S. dollars and percent change)

Industry and company size	NAICS code	Domestic R&D paid for by others and performed by the company	Depreciation	Capital expenditures related to R&D[a]	Adjusted domestic R&D paid for by others and performed by the company	Change	
						Amount	Percent
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	49	2	0	47	-2	-3.3
All companies (number of domestic employees)	–	85,711	2,608	0	83,103	-2,608	-3.0
Small companies							
10–19[b]	–	1,056	11	0	1,045	-11	-1.0
20–49	–	2,026	38	0	1,988	-38	-1.9
Medium companies							
50–99	–	2,080	24	0	2,056	-24	-1.1
100–249	–	2,777	43	0	2,734	-43	-1.6
Large companies							
250–499	–	2,667	85	0	2,582	-85	-3.2
500–999	–	4,545	216	0	4,330	-216	-4.7
1,000–4,999	–	13,201	437 i	0	12,764 i	-437 i	-3.3
5,000–9,999	–	7,146	291	0	6,855	-291	-4.1
10,000–24,999	–	19,357	829	0	18,528	-829	-4.3
25,000 or more	–	30,855	635	0	30,221 i	-635	-2.1

* = -$500,000 < 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; NA = not available.

NAICS = 2017 North American Industry Classification System.

[a] Capital expenditures related to R&D are assumed to be $0 for domestic R&D paid for by others and performed by the company.
[b] The Business Enterprise Research and Development (BERD) 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. To enable comparisons between U.S. statistics from the BERD Survey and statistics from other nations, in this table an internationally comparable adjusted domestic R&D estimate is calculated by subtracting depreciation relating to R&D operations, which is included in U.S. R&D from the BERD Survey, and adding capital expenditures relating to R&D operations, which is excluded from U.S. R&D from the BERD Survey.

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