

TABLE 82

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: 2015

(Millions of U.S. dollars and percent)

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 the company and others	Change	
						Amount	Percent
All industries	21-23, 31-33, 42-81	59,144	1,084	0	58,060	-1,084	-1.8
Manufacturing industries	31-33	40,340	811	0	39,529	-811	-2.0
Food	311	194	6	0	188	-6	-2.9
Beverage and tobacco products	312	117	9	0	108	-9	-7.5
Textile, apparel, and leather products	313-16	32	*	0	32	*	-0.3
Wood products	321	8 i	* i	0	7 i	* i	-2.5
Paper	322	3 i	* i	0	3 i	* i	-3.0
Printing and related support activities	323	7 i	* i	0	7 i	* i	-3.9
Petroleum and coal products	324	14	1	0	13	-1	-9.3
Chemicals	325	9,427	376	0	9,051	-376	-4.0
Basic chemicals	3251	467	46 i	0	421 i	-46 i	-9.9
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	29 i	* i	0	29 i	* i	-0.5
Pesticide, fertilizer, and other agricultural chemicals	3253	D	D	0	D	D	D
Pharmaceuticals and medicines	3254	8,432	296	0	8,136	-296	-3.5
Soap, cleaning compound, and toilet preparation	3256	115	D	0	D	D	D
Paint, coating, adhesive, and other chemicals	3255, 3259	D	*	0	D	*	D
Plastics and rubber products	326	152 i	* i	0	151 i	* i	-0.2
Nonmetallic mineral products	327	20	1	0	19	-1	-4.4
Primary metals	331	49	0	0	49 i	0	0.0
Fabricated metal products	332	223 i	1 i	0	222 i	-1 i	-0.4
Machinery	333	881 i	18 i	0	864 i	-18 i	-2.0
Agricultural implement	33311	15 i	1	0	14 i	-1	-5.9
Semiconductor machinery	333242	297 i	12 i	0	285 i	-12 i	-4.0
Engine, turbine, and power transmission equipment	3336	154	2	0	151	-2	-1.6
Other machinery	other 333	416	2 i	0	413 i	-2 i	-0.5
Computer and electronic products	334	8,345	239	0	8,106	-239	-2.9
Communications equipment	3342	1,426 i	38 i	0	1,387 i	-38 i	-2.7
Semiconductor and other electronic components	3344	1,855	113	0	1,742	-113	-6.1
Navigational, measuring, electromedical, and control instruments	3345	4,910	83	0	4,827	-83	-1.7
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	233	3	0	230	-3	-1.3
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	4,480	74	0	4,405	-74	-1.7
Other measuring and controlling device	other 3345	197	5	0	192	-5	-2.7
Other computer and electronic products	other 334	154	4	0	150	-4	-2.8
Electrical equipment, appliances, and components	335	483 i	9 i	0	475 i	-9 i	-1.8
Transportation equipment	336	20,050 i	145	0	19,905 i	-145	-0.7

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Motor vehicles, bodies, trailers, and parts	3361-63	2,441	83	0	2,359	-83	-3.4
Aerospace products and parts	3364	16,326 i	44	0	16,282 i	-44	-0.3
Aircraft, aircraft engine, and aircraft parts	336411-13	15,063 i	44	0	15,019 i	-44	-0.3
Guided missile, space vehicle, and related parts	336414-15, 336419	1,263 i	*	0	1,263 i	*	*
Military armored vehicle, tank, and tank component	336992	12	*	0	11	*	-3.1
Other transportation	other 336	1,271	19 i	0	1,253 i	-19 i	-1.5
Furniture and related products	337	9 i	* i	0	9 i	* i	-1.6
Miscellaneous	339	326 i	6 i	0	319 i	-6 i	-1.9
Medical equipment and supplies	3391	171	1	0	170	-1	-0.6
Other miscellaneous manufacturing	3399	155 i	5 i	0	149 i	-5 i	-3.5
Nonmanufacturing industries	21-23, 42-81	18,804	273	0	18,531	-273	-1.5
Mining, quarrying, oil and gas extraction, and support activities	21	619	6	0	613	-6	-1.0
Utilities	22	34	0	0	34	0	0.0
Wholesale trade	42	84 i	* i	0	84 i	* i	-0.2
Electronic shopping and electronic auctions	454111-12	16 i	0	0	16 i	0	0.0
Transportation and warehousing	48-49	* i	0	0	* i	0	0.0
Information	51	935	8	0	927	-8	-0.9
Publishing	511	747	4	0	743	-4	-0.6
Newspaper, periodical, book, and directory publishers	5111	* i	0	0	* i	0	0.0
Software publishers	5112	747	4	0	743	-4	-0.6
Telecommunications	517	70 i	1 i	0	68 i	-1 i	-2.0
Data processing, hosting, and related services	518	102	2 i	0	100	-2 i	-2.2
Other information	other 51	16	*	0	15	*	-2.8
Finance and insurance	52	38	* i	0	38	* i	-0.1
Real estate and rental and leasing	53	1 i	0	0	1 i	0	0.0
Lessors of nonfinancial intangible assets (except copyrighted works)	533	0	0	0	0	0	0.0
Other real estate and rental and leasing	other 53	1 i	0	0	1 i	0	0.0
Professional, scientific, and technical services	54	16,710	255	0	16,455	-255	-1.5
Architectural, engineering, and related services	5413	1,881	5 i	0	1,876	-5 i	-0.3
Computer systems design and related services	5415	1,915 i	3 i	0	1,912 i	-3 i	-0.1
Scientific research and development services	5417	12,433	241	0	12,192	-241	-1.9
Research and development in biotechnology	541711	4,157 i	41	0	4,116 i	-41 i	-1.0
Research and development in the physical, engineering, and life sciences (except biotechnology)	541712	7,583	191	0	7,391	-191	-2.5
Research and development in the social sciences and humanities	541720	693	8	0	685	-8	-1.2
Other professional, scientific, and technical services	other 54	481	7	0	475	-7	-1.4
Health care services	621-23	298 i	2 i	0	296 i	-2 i	-0.7

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Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	69	1	0	68	-1	-1.5
All companies (number of domestic employees)	–	59,144	1,084	0	58,060	-1,084	-1.8
Micro companies ^b							
5–9	–	1,016 i	8 i	0	1,008 i	-8 i	-0.8
Small companies							
10–19	–	1,246 i	21 i	0	1,226 i	-21 i	-1.7
20–49	–	2,316 i	33 i	0	2,282 i	-33 i	-1.4
Medium companies							
50–99	–	2,706	52	0	2,654	-52	-1.9
100–249	–	2,566	35	0	2,531	-35	-1.4
Large companies							
250–499	–	2,185	122 i	0	2,062	-122 i	-5.6
500–999	–	2,023 i	52	0	1,971 i	-52	-2.5
1,000–4,999	–	9,830	309	0	9,520	-309	-3.1
5,000–9,999	–	4,178	55	0	4,123	-55	-1.3
10,000–24,999	–	10,878	283	0	10,595	-283	-2.6
25,000 or more	–	20,201	114	0	20,087 i	-114 i	-0.6

* = $-\$500,000 < \text{amount} < \$500,000$ (or $-0.05\% < \text{amount} < 0.05\%$); 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.

NAICS = 2012 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 R&D and Innovation Survey did not include companies with fewer than 5 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 R&D. To enable comparisons between U.S. Business Enterprise Research and Development (BERD) Survey statistics and those of other nations, in this table an internationally comparable adjusted domestic R&D estimate is calculated by subtracting depreciation relating to R&D operations, which was *included* in U.S. BERD domestic R&D, and adding capital expenditures relating to R&D operations, which was *excluded* from U.S. BERD domestic R&D.

Source(s):

National Center for Science and Engineering Statistics and Census Bureau, Business R&D and Innovation Survey, 2015.