

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: 2020

(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	28,905	2,148 i	5,698	21,059
Manufacturing industries	31-33	21,710 i	1,428 i	3,401 i	16,881
Food	311	0	0	0	0
Beverage and tobacco products	312	0	0	0	0
Textile, apparel, and leather products	313-16	5	0	0	5
Wood products	321	*	0	0	* i
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	1,101	39	692	370
Basic chemicals	3251	5	0-3 i	0-3 i	3
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	4	0	3 i	1 i
Pesticide, fertilizer, and other agricultural chemicals	3253	0	0	0	0
Pharmaceuticals and medicines	3254	1,066	37	669	360
Soap, cleaning compound, and toilet preparation	3256	0	0	0	0
Paint, coating, adhesive, and other chemicals	3255, 3259	25	0-3	15-20	6
Plastics and rubber products	326	*	0	* i	* i
Nonmetallic mineral products	327	2	*	1	2
Primary metals	331	0-2	0-2 i	0	0
Fabricated metal products	332	12	0	2 i	9
Machinery	333	98	4	4	90
Agricultural implement	33311	*	*	0	0
Semiconductor machinery	333242	*	0	0	* i
Engine, turbine, and power transmission equipment	3336	87	3	3	81
Other machinery	other 333	9	* i	* i	8
Computer and electronic products	334	6,434 i	250 i	1,073 i	5,110 i
Communications equipment	3342	366-531 i	15-91 i	114-190 i	157-271 i
Semiconductor and other electronic components	3344	68	0-22 i	0-22	47
Navigational, measuring, electromedical, and control instruments	3345	5,837 i	160 i	884 i	4,794 i
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	12	* i	1 i	11
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	5,788 i	158 i	868 i	4,761 i
Other measuring and controlling device	other 3345	38	1 i	15 i	22
Other computer and electronic products	other 334	0-162	0-52	0-52	0-111
Electrical equipment, appliances, and components	335	29	1	3	24
Transportation equipment	336	13,961 i	1,131 i	1,609 i	11,220

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Motor vehicles, bodies, trailers, and parts	3361-63	68	7	9 - 62	0 - 53
Aerospace products and parts	3364	12,797	1,124	1,452	10,220
Aircraft, aircraft engine, and aircraft parts	336411-13	12,051	1,124	1,451	9,476
Guided missile, space vehicle, and related parts	336414-15, 336419	746	0	1	745
Military armored vehicle, tank, and tank component	336992	0 - 7	0	0	0 - 7
Other transportation	other 336	1,088 - 1,098	0	94 - 147	941 - 997
Furniture and related products	337	*	0	* i	0
Miscellaneous	339	65 - 72	0 - 6	16	50
Medical equipment and supplies	3391	36	* i	14	22
Other miscellaneous manufacturing	3399	29 - 36	0 - 6	2	28
Nonmanufacturing industries	21-23, 42-81	7,195	720	2,297	4,177
Mining, quarrying, oil and gas extraction, and support activities	21	3	0	0 - 3	0 - 4
Utilities	22	35	*	6	30
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	364	*	80	284
Publishing	511	65	* i	54	11
Newspaper, periodical, book, and directory publishers	5111	0	0	0	0
Software publishers	5112	65	* i	54	11
Telecommunications	517	2 - 14	*	*	1 - 14
Data processing, hosting, and related services	518	287	*	26	261
Other information	other 51	0 - 11	0	0	0 - 11
Finance and insurance	52	45	23	0	22
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	6,733	691	2,210	3,832
Architectural, engineering, and related services	5413	1,466	69	537	860
Computer systems design and related services	5415	662	37	130	495
Scientific research and development services	5417	3,914	562	1,495	1,858
Research and development in nanotechnology	541713	38	5	14	19
Research and development in biotechnology (except nanobiotechnology)	541714	117	15	41	61
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	3,157	179	1,234 - 1,284	1,694 - 1,744

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Research and development in the social sciences and humanities	541720	603	362	157 - 205 i	35 - 83 i
Other professional, scientific, and technical services	other 54	690	23	48	619
Health care services	621-23	13	6	* i	6
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	2	0	0 - 3 i	0 - 3
All companies (number of domestic employees)	-	28,905	2,148 i	5,698	21,059
Small companies					
10-19 ^a	-	445	47 i	172 i	227 i
20-49	-	856	44	159	653
Medium companies					
50-99	-	604	20	153	430
100-249	-	1,499	124	355	1,020
Large companies					
250-499	-	1,070	59	340	671
500-999	-	467	45	85 i	337
1,000-4,999	-	2,744	364	1,248	1,133
5,000-9,999	-	814	41	159	614
10,000-24,999	-	1,330	33 i	199	1,098
25,000 or more	-	19,075 i	1,373 i	2,827 i	14,875 i

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

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, 2020.