

TABLE 7

Worldwide R&D paid for by others and performed by the company and others, by industry and company size: 2022

(Millions of U.S. dollars)

Industry and company size	NAICS code	Total	Performed by the company	Performed by others
All industries	21-23, 31-33, 42-81	107,490	98,064	9,425
Manufacturing industries	31-33	53,428	47,151	6,277
Food	311	360	358	2
Beverage and tobacco products	312	110	107	3
Textile, apparel, and leather products	313-16	15	15	*
Wood products	321	5	5	0
Paper	322	1	*	* i
Printing and related support activities	323	1	1	*
Petroleum and coal products	324	10	9	1
Chemicals	325	16,527	12,514	4,013
Basic chemicals	3251	215	212	3
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	117	D	D
Pesticide, fertilizer, and other agricultural chemicals	3253	D	D	D
Pharmaceuticals and medicines	3254	15,584	11,617	3,967
Soap, cleaning compound, and toilet preparations	3256	240	238	1
Paint, coating, adhesive, and other chemicals	3255, 3259	D	D	D
Plastics and rubber products	326	257	248	8
Nonmetallic mineral products	327	37	29	8 r
Primary metals	331	32	22	10
Fabricated metal products	332	257	256 i	2
Machinery	333	1,410	1,354	56
Agricultural implement	33311	163	145	18
Semiconductor machinery	333242	68	66	2
Engine, turbine, and power transmission equipment	3336	351	337	14
Other machinery	other 333	828	806	22 r
Computer and electronic products	334	5,778	5,627	151
Communications equipment	3342	821	807 i	14
Semiconductor and other electronic components	3344	2,040	2,035	4
Navigational, measuring, electromedical, and control instruments	3345	2,840	2,709	131
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	653 i	626 i	27 i
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	2,093	1,998	95
Other measuring and controlling devices	other 3345	94	85	9
Other computer and electronic products	other 334	78	76	2
Electrical equipment, appliances, and components	335	450	435 i	15 i
Transportation equipment	336	27,753	25,761	1,992
Motor vehicles, bodies, trailers, and parts	3361-63	2,869	2,647	222
Aerospace products and parts	3364	23,793	22,024	1,770
Aircraft, aircraft engine, and aircraft parts	336411-13	17,180 i	15,423 i	1,757
Guided missile, space vehicle, and related parts	336414-15, 336419	6,614	6,601	13
Military armored vehicle, tank, and tank components	336992	4	4	0
Other transportation	other 336	1,087	1,087	* r
Furniture and related products	337	6	5	1 r
Miscellaneous	339	419	405	14
Medical equipment and supplies	3391	345	337	9
Other miscellaneous manufacturing	3399	73	68	5
Nonmanufacturing industries	21-23, 42-81	54,062	50,914 i	3,148 i
Mining, quarrying, oil and gas extraction, and support activities	21	68	55 i	13 r
Utilities	22	D	D	18
Wholesale trade	42	45	41	4 r

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Electronic shopping and electronic auctions	454111-12	0	0	0
Transportation and warehousing	48-49	D	D	1
Information	51	1,173	1,112	61
Publishing	511	897	842	55
Newspaper, periodical, book, and directory publishers	5111	1	1	0
Software publishers	5112	896	841	55
Telecommunications	517	81	79	2
Data processing, hosting, and related services	518	153	149	3
Other information	other 51	42	42	* i
Finance and insurance	52	99	99	0
Real estate and rental and leasing	53	0	0	0
Lessors of nonfinancial intangible assets (except copyrighted works)	533	0	0	0
Other real estate and rental and leasing	other 53	0	0	0
Professional, scientific, and technical services	54	51,824	48,795	3,029
Architectural, engineering, and related services	5413	1,116	977	138
Computer systems design and related services	5415	3,799	3,696	104
Scientific research and development services	5417	45,612	42,938	2,675
Research and development in nanotechnology	541713	116	109	7
Research and development in biotechnology (except nanobiotechnology)	541714	11,411	11,307	104
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	33,412	30,849	2,563
Research and development in the social sciences and humanities	541720	673	673	0
Other professional, scientific, and technical services	other 54	1,296	1,185	112
Health care services	621-23	73	70	3
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	113	94	19
All companies (number of domestic employees)	-	107,490	98,064	9,425
Small companies				
10-19 ^a	-	1,437	1,285	151
20-49	-	2,142	1,934	207
Medium companies				
50-99	-	2,357	2,026	331
100-249	-	3,764	3,087	677
Large companies				
250-499	-	3,845	3,236	608
500-999	-	3,576	3,194	382
1,000-4,999	-	11,998	10,452	1,545
5,000-9,999	-	5,294	5,103	191
10,000-24,999	-	35,528	33,028	2,499
25,000 or more	-	37,549	34,717	2,832

* = 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.