

TABLE 5

**Worldwide R&D paid for by the company and performed by the company and others, by industry and company size: 2020**

(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	612,326	564,350	47,977
Manufacturing industries	31-33	372,693	329,425	43,268
Food	311	6,516	6,139	377
Beverage and tobacco products	312	2,096	1,814	281
Textile, apparel, and leather products	313-16	976	964	12
Wood products	321	202	192	10
Paper	322	1,032	1,020	12
Printing and related support activities	323	296	292	4
Petroleum and coal products	324	1,634	1,387	247
Chemicals	325	140,240	108,521	31,719
Basic chemicals	3251	3,468	3,364	104
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	1,703	1,665	38
Pesticide, fertilizer, and other agricultural chemicals	3253	995	866	129
Pharmaceuticals and medicines	3254	128,431	97,406	31,025
Soap, cleaning compound, and toilet preparation	3256	3,609	3,239	370
Paint, coating, adhesive, and other chemicals	3255, 3259	2,034	1,981	53
Plastics and rubber products	326	3,168	3,136	32
Nonmetallic mineral products	327	1,952	1,822	130
Primary metals	331	859	827	32
Fabricated metal products	332	3,774	3,681	94
Machinery	333	19,806	19,254	552
Agricultural implement	33311	2,678	2,399	279
Semiconductor machinery	333242	5,142	5,134	8
Engine, turbine, and power transmission equipment	3336	2,044	2,032	13
Other machinery	other 333	9,942	9,689	253
Computer and electronic products	334	118,502	114,726	3,776
Communications equipment	3342	15,584	14,486	1,098
Semiconductor and other electronic components	3344	53,992	53,669	323
Navigational, measuring, electromedical, and control instruments	3345	14,490	13,995	495
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	3,225	3,094	132
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	4,325	4,119	206
Other measuring and controlling device	other 3345	6,940	6,783	158
Other computer and electronic products	other 334	34,435	32,576	1,859
Electrical equipment, appliances, and components	335	6,361	6,244	117
Transportation equipment	336	40,807	36,134	4,674
Motor vehicles, bodies, trailers, and parts	3361-63	28,987	24,821	4,166
Aerospace products and parts	3364	9,944	9,526	417
Aircraft, aircraft engine, and aircraft parts	336411-13	8,975	8,686	289
Guided missile, space vehicle, and related parts	336414-15, 336419	969	840	129
Military armored vehicle, tank, and tank component	336992	4	4	*
Other transportation	other 336	1,873	1,782	91
Furniture and related products	337	553	532	21
Miscellaneous	339	23,918	22,739	1,179
Medical equipment and supplies	3391	20,806	19,718	1,088
Other miscellaneous manufacturing	3399	3,112	3,022	91
Nonmanufacturing industries	21-23, 42-81	239,633	234,925	4,708
Mining, quarrying, oil and gas extraction, and support activities	21	1,375	1,239	136
Utilities	22	420	230	190
Wholesale trade	42	1,205	1,045	160

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Electronic shopping and electronic auctions	454111-12	3,935 - 24,328	3,935 - 24,223	0 - 106
Transportation and warehousing	48-49	5,193	4,991	203
Information	51	153,753	151,219	2,534
Publishing	511	43,750	42,169	1,580
Newspaper, periodical, book, and directory publishers	5111	64	60	4
Software publishers	5112	43,686	42,109	1,577
Telecommunications	517	3,925	3,466	459
Data processing, hosting, and related services	518	49,586	49,250	336
Other information	other 51	56,493	56,334	159
Finance and insurance	52	14,072	13,695	378
Real estate and rental and leasing	53	3,414	3,412	2
Lessors of nonfinancial intangible assets (except copyrighted works)	533	6 - 21	6 - 21	0
Other real estate and rental and leasing	other 53	3,392 - 3,408	3,390 - 3,406	2
Professional, scientific, and technical services	54	33,007	32,053	954
Architectural, engineering, and related services	5413	2,290	2,225	65
Computer systems design and related services	5415	17,798	17,502	296
Scientific research and development services	5417	6,983	6,442	540
Research and development in nanotechnology	541713	128	125 - 129	0 - 3
Research and development in biotechnology (except nanobiotechnology)	541714	1,497	1,284	213
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	5,311 - 5,322	4,988 - 4,996	323 - 328
Research and development in the social sciences and humanities	541720	37 - 45	37 - 45	*
Other professional, scientific, and technical services	other 54	5,937	5,884	53
Health care services	621-23	1,432	1,393	38
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	1,434 - 21,831	1,429 - 21,717	5 - 118
All companies (number of domestic employees)	-	612,326	564,350	47,977
Small companies				
10-19 <sup>a</sup>	-	4,953	4,282	671
20-49	-	13,596	11,538	2,059
Medium companies				
50-99	-	13,639	11,935	1,704
100-249	-	27,557	24,122	3,435
Large companies				
250-499	-	22,541	20,772	1,769
500-999	-	23,839	21,478	2,361
1,000-4,999	-	99,309	94,028	5,281
5,000-9,999	-	57,865	51,966	5,899
10,000-24,999	-	101,269	89,792	11,477
25,000 or more	-	247,760	234,437	13,323

\* = amount &lt; \$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.

<sup>a</sup> 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.