

TABLE 5

## Worldwide R&amp;D paid for by the company and performed by the company and others, by industry and company size: 2015

(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	412,345	364,500	47,846
Manufacturing industries	31–33	289,076	246,408	42,668
Food	311	6,107	5,874	233
Beverage and tobacco products	312	1,750	1,406	344
Textiles, apparel, and leather products	313–16	810	786	24
Wood products	321	200	190	10
Paper	322	884	864	20
Printing and related support activities	323	197	191	6
Petroleum and coal products	324	D	238	D
Chemicals	325	104,652	71,688	32,964
Basic chemicals	3251	3,412	3,206	205
Resins, synthetic rubber, and artificial synthetic fibers and filaments	3252	1,835	1,750	85
Pesticides, fertilizers, and other agricultural chemicals	3253	D	D	D
Pharmaceuticals and medicines	3254	92,966	60,629	32,337
Soaps, cleaning compounds, and toilet preparations	3256	1,575	1,433	143
Paints, coatings, adhesives, and other chemicals	3255, 3259	D	D	D
Plastics and rubber products	326	2,805	2,746	59
Nonmetallic mineral products	327	1,617	1,463	154
Primary metals	331	739	666	74
Fabricated metal products	332	2,331	2,232	99
Machinery	333	16,399	15,745	654
Agricultural implements	33311	2,364	2,133	231
Semiconductor machinery	333242	3,457	3,439	18
Engines, turbines, and power transmission equipment	3336	2,822	2,789	33
Other machinery	other 333	7,756	7,384	372
Computer and electronic products	334	86,539	84,126	2,413
Communications equipment	3342	22,608	21,614	994
Semiconductors and other electronic components	3344	39,197	38,415	782
Navigational, measuring, electromedical, and control instruments	3345	12,359	11,904	455
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	3,515	3,445	70
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	3,670	3,444	226
Other measuring and controlling devices	other 3345	5,175	5,016	159
Other computer and electronic products	other 334	12,375	12,193	182
Electrical equipment, appliances, and components	335	5,434	5,201	232
Transportation equipment	336	41,471	37,001	4,471
Automobiles, bodies, trailers, and parts	3361–63	25,749	22,862	2,888
Aerospace products and parts	3364	D	D	1,537
Aircraft, aircraft engines, and aircraft parts	336411–13	D	D	1,429
Guided missiles, space vehicles, and related parts	336414–15, 336419	493	385	108
Military armored vehicles, tanks, and tank components	336992	6	5	1
Other transportation	other 336	D	D	44
Furniture and related products	337	504	468	37
Miscellaneous manufacturing	339	D	15,523	D
Medical equipment and supplies	3391	13,678	12,975	703
Other miscellaneous manufacturing	3399	D	2,548	D
Nonmanufacturing industries	21–23, 42–81	123,270	118,092	5,178
Mining, extraction, and support activities	21	4,147	3,701	446
Utilities	22	710	449	262
Wholesale trade	42	D	1,709	D
Electronic shopping and electronic auctions	454111–12	D	D	D

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Transportation and warehousing	48-49	D	415	D
Information	51	79,386	77,085	2,301
Publishing	511	42,984	41,431	1,553
Newspaper, periodical, book, and directory publishers	5111	116	107	i 9 i
Software publishers	5112	42,868	41,324	1,545
Telecommunications	517	3,778	3,577	200
Data processing, hosting, and related services	518	10,887	10,572	315
Other information	other 51	21,738	21,505	233
Finance and insurance	52	6,384	6,254	130
Real estate and rental and leasing	53	320	313	7
Lessors of nonfinancial intangible assets (except copyrighted works)	533	D	D	3
Other real estate and rental and leasing	other 53	D	D	4
Professional, scientific, and technical services	54	26,640	25,054	1,586
Architectural, engineering, and related services	5413	2,386	2,276	i 110 i
Computer systems design and related services	5415	15,253	15,130	122
Scientific research and development services	5417	5,263	3,973	1,290
Biotechnology research and development	541711	2,259	1,561	697
Physical, engineering, and life sciences (except biotechnology) research and development	541712	2,989	2,400	589
Social sciences and humanities research and development	541720	15	12	i 4 i
Other professional, scientific, and technical services	other 54	3,738	3,674	63
Health care services	621-23	489	463	26 i
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	1,166	D	D
All companies (number of domestic employees)	-	412,345	364,500	47,846
Micro companies <sup>a</sup>				
5-9	-	2,559	2,085	i 474 i
Small companies				
10-19	-	5,424	4,501	i 923
20-49	-	9,943	8,279	i 1,664
Medium companies				
50-99	-	10,863	9,119	1,744
100-249	-	14,332	12,348	1,985
Large companies				
250-499	-	13,719	12,451	1,268
500-999	-	16,716	15,602	1,114
1,000-4,999	-	68,185	61,019	7,166
5,000-9,999	-	49,487	43,593	5,895
10,000-24,999	-	70,264	57,444	12,820
25,000 or more	-	150,852	138,060	12,792

D = data withheld to avoid disclosing operations of individual companies; i = > 50% of the estimate is a combination of imputation and reweighting to account for nonresponse.

NAICS = 2012 North American Industry Classification System.

<sup>a</sup> Business R&D and Innovation Survey does not include companies with fewer than five 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.

**Source(s)**

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