

TABLE 5. Worldwide R&D paid for by the company and performed by the company and others, by industry and company size: 2012
(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	352,853	314,287	38,566
Manufacturing industries	31-33	255,385	221,767	33,618
Food	311	5,424	4,992	432
Beverage and tobacco products	312	1,480	1,220	260
Textile, apparel, and leather products	313-16	605	589	16
Wood products	321	D	454 i	D
Paper	322	870	849	21
Printing and related support activities	323	293	288 i	5 i
Petroleum and coal products	324	D	D	D
Chemicals	325	86,938	64,010	22,927
Basic chemicals	3251	3,918	3,256	662
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	1,147	1,106	41
Pesticide, fertilizer, and other agricultural chemical	3253	1,643	1,582	61 i
Pharmaceuticals and medicines	3254	75,127	53,421	21,706
Soap, cleaning compound, and toilet preparation	3256	3,565	3,209	357
Paint, coating, adhesive, and other chemicals	3255, 3259	1,537	1,437	100
Plastics and rubber products	326	4,218	3,979	239
Nonmetallic mineral products	327	1,781	1,553 i	227
Primary metals	331	888	762	126
Fabricated metal products	332	1,892	1,842	50 i
Machinery	333	18,370	17,346	1,024
Agricultural implement	33311	2,386	2,089	297
Semiconductor machinery	333295	2,697	2,664	33
Engine, turbine, and power transmission equipment	3336	5,669	5,162	507
Other machinery	other 333	7,618	7,431	187
Computer and electronic products	334	79,286	76,893	2,393
Communications equipment	3342	18,201	17,038	1,162
Semiconductor and other electronic components	3344	35,980	35,431	549
Navigational, measuring, electromedical, and control instruments	3345	13,724	13,185	539
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	4,945	4,749	196
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	D	3,302	D
Other measuring and controlling device	other 3345	D	5,134	D
Other computer and electronic products	other 334	11,381	11,239	143
Electrical equipment, appliances, and components	335	4,157	3,954	204
Transportation equipment	336	33,462	28,830	4,633
Automobiles, bodies, trailers, and parts	3361-63	23,427	20,118	3,309
Aerospace products and parts	3364	8,877	7,591	1,286
Aircraft, aircraft engine, and aircraft parts	336411-13	D	7,141	D
Guided missile, space vehicle, and related parts	336414-15, 336419	D	450 i	D
Military armored vehicle, tank, and tank component	336992	22	21	1
Other transportation	other 336	1,136	1,099	37
Furniture and related products	337	394	371	23
Miscellaneous manufacturing	339	D	D	D
Medical equipment and supplies	3391	10,506	9,861	645
Other miscellaneous manufacturing	3399	D	D	D
Nonmanufacturing industries	21-23, 42-81	97,468	92,520	4,948
Mining, extraction, and support activities	21	3,021	2,710	311
Utilities	22	505	266	239
Wholesale trade	42	1,837	1,692 i	145 i
Electronic shopping and electronic auctions	454111-12	D	D	2 i
Transportation and warehousing	48-49	205	186	20 i
Information	51	57,304	55,718	1,586
Publishing	511	37,115	36,093	1,023
Newspaper, periodical, book, and directory publishers	5111	267 i	243 i	24 i
Software publishers	5112	36,848	35,850	998
Telecommunications	517	3,019	2,826 i	193 i
Data processing, hosting, and related services	518	5,664	5,454	209

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Other information	other 51	11,506	11,345	161
Finance and insurance	52	4,312	4,135	177
Real estate and rental and leasing	53	420	397	24
Lessors of nonfinancial intangible assets (except copyrighted works)	533	398	375	22
Other real estate and rental and leasing	other 53	23	21 i	1 i
Professional, scientific, and technical services	54	25,594	23,417	2,177
Architectural, engineering, and related services	5413	1,201	1,171	30
Computer systems design and related services	5415	11,754	11,560 i	194
Scientific research and development services	5417	9,049	7,161	1,889
Biotechnology research and development	541711	6,077	4,429	1,648
Physical, engineering, and life sciences (except biotechnology) research and development	541712	2,950	2,711	239
Social sciences and humanities research and development	541720	22	20 i	1 i
Other professional, scientific, and technical services	other 54	3,590	3,525	64
Health care services	621-23	473	432	41 i
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	D	D	226 i
All companies (number of domestic employees)	-	352,853	314,287	38,566
Small companies ^a				
5-499	-	48,661	42,890	5,771
5-99	-	24,218	21,009 i	3,209
5-49	-	15,505	13,102 i	2,403
5-9	-	2,380	2,064 i	316 i
10-24	-	5,951	5,086 i	864
25-49	-	7,174	5,952 i	1,222
50-99	-	8,713	7,907	806
100-249	-	12,603	11,081	1,523
250-499	-	11,840	10,800	1,040
Medium and large companies				
500-999	-	12,631	11,615	1,016
1,000-4,999	-	60,515	55,086	5,429
5,000-9,999	-	33,869	30,484	3,385
10,000-24,999	-	63,743	52,955	10,788
25,000 or more	-	133,434	121,257	12,177

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 = 2007 North American Industry Classification System.

^a The upper bound is based on the U.S. Small Business Administration's definition of a small business; the Business R&D and Innovation Survey does not include companies with fewer than five domestic employees.

NOTES: Detail may not add to total because of rounding. The 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: National Science Foundation, National Center for Science and Engineering Statistics, and U.S. Census Bureau, Business R&D and Innovation Survey, 2012.