

TABLE 7. Worldwide R&D paid for by others 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	73,187	59,947	13,239
Manufacturing industries	31–33	49,733	39,514	10,218 i
Food	311	D	176	D
Beverage and tobacco products	312	D	D	D
Textile, apparel, and leather products	313–16	D	23	D
Wood products	321	9	9	*
Paper	322	10	9	1
Printing and related support activities	323	4	3 i	1 i
Petroleum and coal products	324	19	14	5
Chemicals	325	10,010	6,582	3,427
Basic chemicals	3251	392 i	385 i	7
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	D	D	D
Pesticide, fertilizer, and other agricultural chemical	3253	286	D	D
Pharmaceuticals and medicines	3254	D	5,718	D
Soap, cleaning compound, and toilet preparation	3256	5	4 i	1 i
Paint, coating, adhesive, and other chemicals	3255, 3259	D	D	D
Plastics and rubber products	326	D	359 i	D
Nonmetallic mineral products	327	38	34	4
Primary metals	331	60	56	4
Fabricated metal products	332	119	114 i	5 i
Machinery	333	1,304	1,077	227
Agricultural implement	33311	D	53	D
Semiconductor machinery	333295	76	75	1
Engine, turbine, and power transmission equipment	3336	868	D	D
Other machinery	other 333	D	D	D
Computer and electronic products	334	9,194	8,712	482
Communications equipment	3342	1,553	1,476 i	77 i
Semiconductor and other electronic components	3344	1,523	1,457	66
Navigational, measuring, electromedical, and control instruments	3345	5,770	5,437	333
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	245	234	12
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	5,330	5,010	320
Other measuring and controlling device	other 3345	195	194 i	1 i
Other computer and electronic products	other 334	347	342	6 i
Electrical equipment, appliances, and components	335	202	197	5
Transportation equipment	336	D	21,548 i	D
Automobiles, bodies, trailers, and parts	3361–63	D	D	D
Aerospace products and parts	3364	D	D	D
Aircraft, aircraft engine, and aircraft parts	336411–13	D	D	D
Guided missile, space vehicle, and related parts	336414–15, 336419	985	975	10
Military armored vehicle, tank, and tank component	336992	D	D	D
Other transportation	other 336	D	D	D
Furniture and related products	337	*	* i	0
Miscellaneous	339	D	D	D
Medical equipment and supplies	3391	461	436	25
Other miscellaneous manufacturing	3399	D	D	D
Nonmanufacturing industries	21–23, 42–81	23,454	20,433	3,021
Mining, extraction, and support activities	21	D	D	D
Utilities	22	130	103	27
Wholesale trade	42	250 i	246 i	5 i
Electronic shopping and electronic auctions	454111–12	6	6 i	0
Transportation and warehousing	48–49	1	1	0
Information	51	1,005	993	11
Publishing	511	768	765	3
Newspaper, periodical, book, and directory publishers	5111	1	1 i	* i
Software publishers	5112	768	764	3

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Industry and company size	NAICS code	Total	Performed by the company	Performed by others
Telecommunications	517	60	57	3
Data processing, hosting, and related services	518	124	119	5
Other information	other 51	52	52 i	* i
Finance and insurance	52	12	12	0
Real estate and rental and leasing	53	4	4	0
Lessors of nonfinancial intangible assets (except copyrighted works)	533	4	4	0
Other real estate and rental and leasing	other 53	0	0	0
Professional, scientific, and technical services	54	20,608	17,732	2,876
Architectural, engineering, and related services	5413	1,739	1,399 i	340 i
Computer systems design and related services	5415	2,213	2,089	124
Scientific research and development	5417	15,660	13,310	2,350
Biotechnology research and development	541711	4,737	3,936	801
Physical, engineering, and life sciences (except biotechnology) research and development	541712	10,213	8,795	1,418
Social sciences and humanities research and development	541720	711	580	131
Other professional, scientific, and technical services	other 54	996	933	62
Health care services	621-23	289	280 i	9 i
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	D	D	D
All companies (number of domestic employees)	-	73,187	59,947	13,239
Small companies ^a				
5-499	-	12,409	10,722 i	1,687
5-99	-	7,357	6,346 i	1,011 i
5-49	-	5,085	4,405 i	680 i
5-9	-	1,063	961 i	102 i
10-24	-	2,251	1,940 i	311 i
25-49	-	1,771	1,504	267
50-99	-	2,272	1,941	331
100-249	-	3,075	2,615	460
250-499	-	1,978	1,761	217
Medium and large companies				
500-999	-	1,402	1,307	95
1,000-4,999	-	10,831	8,068	2,763
5,000-9,999	-	11,756	10,157	1,599
10,000-24,999	-	7,668	6,758	910
25,000 or more	-	29,121 i	22,936 i	6,185 i

* = amount < \$500,000; 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.