

TABLE 6. Worldwide R&D paid for by the company and performed by the company and others, by industry and company size: 2011
(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	341,335	303,806	37,529
Manufacturing industries	31–33	244,877	213,911	30,966
Food	311	5,850	5,399	451
Beverage and tobacco products	312	1,808	1,509	298
Textile, apparel, and leather products	313–316	670	648	22
Wood products	321	215	203	12
Paper	322	1,785	1,703	82
Printing and related support activities	323	212	206	6
Petroleum and coal products	324	1,447	D	D
Chemicals	325	86,832	66,154	20,678
Basic chemicals	3251	5,403	D	D
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	1,175	1,104	70
Pesticide, fertilizer, and other agricultural chemical	3253	1,804	D	D
Pharmaceuticals and medicines	3254	73,096	53,477	19,619
Soap, cleaning compound, and toilet preparation	3256	3,807	3,381	426
Paint, coating, adhesive, and other chemicals	3255, 3259	1,548	1,436	112
Plastics and rubber products	326	2,412	2,329	84
Nonmetallic mineral products	327	1,617	1,398	219
Primary metals	331	837	699	138
Fabricated metal products	332	1,934	1,875	59
Machinery	333	17,957	16,942	1,016
Agricultural implement	33311	1,792	1,546	246
Semiconductor machinery	333295	2,626	2,591	35
Engine, turbine, and power transmission equipment	3336	5,377	D	D
Other machinery	other 333	8,162	D	D
Computer and electronic products	334	72,827	70,637	2,190
Communications equipment	3342	14,527	13,680	847
Semiconductor and other electronic components	3344	31,118	30,697	421
Navigational, measuring, electromedical, and control instruments	3345	13,944	13,439	506
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	4,871	4,678	192
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	3,470	3,285	185
Other measuring and controlling device	other 3345	5,604	5,475	128
Other computer and electronic products	other 334	13,238	12,822	416
Electrical equipment, appliances, and components	335	5,317	5,119	198
Transportation equipment	336	32,154	27,677	4,477
Motor vehicles, bodies, trailers, and parts	3361, 3362, 3363	21,921	18,499	3,422
Aerospace products and parts	3364	9,036	8,125	911
Aircraft, aircraft engine, and aircraft parts	336411–13	8,682	D	D
Guided missile, space vehicle, and related parts	336414–15, 336419	354	D	D
Military armored vehicle, tank, and tank component	336992	D	29	D
Other transportation equipment	other 336	D	1,024	D
Furniture and related products	337	353	346	8
Miscellaneous manufacturing	339	10,649	D	D
Medical equipment and supplies	3391	8,033	7,414	620
Other miscellaneous manufacturing	3399	2,615	D	D
Nonmanufacturing industries	21–23, 42–81	96,458	89,895	6,563
Mining, extraction, and support activities	21	2,998	2,641	358
Utilities	22	603	325	277
Wholesale trade	42	2,020	1,708	313
Electronic shopping and electronic auctions	454111–12	1,610	D	D
Transportation and warehousing	48–49	121	109	12
Information	51	52,939	50,551	2,388
Publishing	511	36,779	35,579	1,200
Newspaper, periodical, book, and directory publishers	5111	511	497	14
Software publishers	5112	36,268	35,082	1,186

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Telecommunications	517	3,147	2,137	1,010 i
Data processing, hosting, and related services	518	4,665	4,561	104
Other information	other 51	8,348	8,273	75
Finance and insurance	52	3,944	3,804	140
Real estate and rental and leasing	53	465	D	D
Lessors of nonfinancial intangible assets (except copyrighted works)	533	D	365	D
Other real estate and rental and leasing	other 53	D	D	D
Professional, scientific, and technical services	54	29,367	26,464	2,902
Architectural, engineering, and related services	5413	2,020	1,916	104
Computer systems design and related services	5415	14,169	13,962	207
Scientific research and development services	5417	8,786	6,483	2,303
Biotechnology research and development	541711	6,297	4,347	1,950
Physical, engineering, and life sciences (except biotechnology) research and development	541712	2,470	2,119	351
Social sciences and humanities research and development	541720	19 i	17 i	2 i
Other professional, scientific, and technical services	other 54	4,392	4,103	289
Health care services	621-23	598	573	25
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	1,793	D	D
All companies (number of domestic employees)	-	341,335	303,806	37,529
Small companies ^a				
5-499	-	56,053	50,323	5,729
5-99	-	29,418	26,215	3,203
5-49	-	20,510	18,132	2,378
5-9	-	3,381	3,019	362
10-24	-	6,364	5,416	948
25-49	-	10,765	9,698	1,068
50-99	-	8,908	8,083	825
100-249	-	12,655	11,472	1,182
250-499	-	13,980	12,636	1,344
Medium and large companies				
500-999	-	10,864	10,144	719
1,000-4,999	-	61,383	55,250	6,133
5,000-9,999	-	25,809	23,858	1,951
10,000-24,999	-	64,692	54,770	9,922
25,000 or more	-	122,535	109,460	13,075

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

NAICS = 2007 North American Industry Classification System.

^a Upper bound based on U.S. Small Business Administration's definition of a small business; 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. Industry classification based on dominant business code for domestic R&D performance where available. For companies that did not report business codes, 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, 2011.