

TABLE 5. Foreign R&D paid for by the company and others and performed by the company, by industry and company size: 2008–13

(Millions of U.S. dollars)

Industry and company size	NAICS code	2008	2009	2010	2011	2012	2013
All industries	21–23, 31–33, 42–81	61,475	54,066	59,162	69,251	72,157	73,100
Manufacturing industries	31–33	46,572	40,417	44,464	51,458	53,120	51,104
Food	311	596	817	1,006	1,195	1,076	1,315
Beverage and tobacco products	312	123	455	783 i	599	532	531
Textile, apparel, and leather products	313–16	367	80	39	49	52	98
Wood products	321	4	2	3	1	2	2
Paper	322	274	257	324	93	106	103
Printing and related support activities	323	9	7	38	30	35	6
Petroleum and coal products	324	D	156	D	D	D	46
Chemicals	325	13,990	9,689	14,267	16,215	13,470	12,733
Basic chemicals	3251	1,198	797	861	D	695	715
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	224	260	255	319	D	506
Pesticide, fertilizer, and other agricultural chemicals	3253	371	D	D	D	D	275 i
Pharmaceuticals and medicines	3254	10,862	7,041	11,068	12,557	11,069	10,051
Soap, cleaning compound, and toilet preparation	3256	965	873	884	910	870	924
Paint, coating, adhesive, and other chemicals	3255, 3259	370	D	D	195	210	263
Plastics and rubber products	326	341	595	386	362	861	931
Nonmetallic mineral products	327	106	54	282 i	253	261	249 i
Primary metals	331	114	130	121	108	77	82
Fabricated metal products	332	188	117	91	135	122	116
Machinery	333	1,929	1,930	2,143	3,587	3,710	2,852
Agricultural implement	33311	399	391	D	293	596	646
Semiconductor machinery	333295	366	285	296	376	66	451
Engine, turbine, and power transmission equipment	3336	92	83	D	D	D	347
Other machinery	other 333	1,072	1,170	1,254	D	D	1,408
Computer and electronic products	334	15,774	12,917	13,722	16,708	21,117	18,275
Communications equipment	3342	2,951	2,862	3,194	2,863	4,525	4,696
Semiconductor and other electronic components	3344	7,075	6,058	6,343	7,909	10,082	9,809
Navigational, measuring, electromedical, and control instruments	3345	2,308	2,180	2,158	2,390	2,722	2,291
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	838	522	360	557	586	202
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	D	508	475	575	578	647
Other measuring and controlling device	other 3345	D	1,149	1,324	1,258	1,557	1,441
Other computer and electronic products	other 334	3,440	1,817	2,027	3,546	3,788	1,480
Electrical equipment, appliances, and components	335	1,162	1,158	1,447	1,695	1,062	1,605
Transportation equipment	336	10,267	7,974	8,422	7,936	8,075	9,219
Automobiles, bodies, trailers, and parts	3361, 3362, 3363	8,448	6,023	D	D	D	6,877
Aerospace products and parts	3364	1,816	1,846	1,770	772	D	2,218
Aircraft, aircraft engine, and aircraft parts	336411–13	1,742	1,760	D	D	D	D
Guided missile, space vehicle, and related parts	336414–15, 336419	74	85	D	D	5	D
Military armored vehicle, tank, and tank components	336992	0	D	D	1	0	0

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Other transportation	other 336	3	D	D	D	D	125
Furniture and related products	337	27	38	33	28	23	28
Miscellaneous manufacturing	339	D	4,044	D	D	D	2,913
Medical equipment and supplies	3391	766	3,813	1,003	D	1,978	2,502
Other miscellaneous manufacturing	3399	D	231	D	D	D	411
Nonmanufacturing industries	21–23, 42–81	14,903	13,648	14,698	17,792	19,037	21,996
Mining, extraction, and support activities	21	D	D	239	232	D	452
Utilities	22	6	13	17	38	21	23
Wholesale trade	42	509	D	53	141 i	112 i	25 i
Electronic shopping and electronic auctions	454111–12	NA	NA	D	D	D	490
Transportation and warehousing	48–49	2	1	29	28 i	8 i	7
Information	51	7,657	7,243	8,011	9,644	9,915	13,650
Publishing	511	6,301	6,332	6,926	7,899	7,880	11,337
Newspaper, periodical, book, and directory publishers	5111	27	47	55	29	2 i	6 i
Software publishers	5112	6,274	6,285	6,871	7,870	7,878	11,331
Telecommunications	517	175	86	131	98	59	63
Data processing, hosting, and related services	518	1,089 i	266	142 i	339	661	631
Other information	other 51	93	559	812	1,308	1,316	1,619
Finance and insurance	52	74	518	467	496	628	703
Real estate and rental and leasing	53	65	28	37	D	38	11
Lessors of nonfinancial intangible assets (except copyrighted works)	533	NA	NA	NA	41	37	D
Other real estate and rental and leasing	other 53	NA	NA	NA	D	* i	D
Professional, scientific, and technical services	54	6,150	5,328	5,309	6,424	6,723	6,543
Architectural, engineering, and related services	5413	200	126	148 i	D	57	41
Computer systems design and related services	5415	2,164	1,959	2,099	2,243 i	2,398 i	1,294
Scientific research and development services	5417	3,544	2,905	2,696	3,581	3,810	4,263
Biotechnology research and development	541711	NA	683	729	942	977	1,400
Physical, engineering, and life sciences (except biotechnology) research and development	541712	NA	2,213	1,962	2,638	2,830	2,861
Social sciences and humanities research and development	541720	NA	9	5	1	2	3
Other professional, scientific, and technical services	other 54	241	338	366	D	458	944
Health care services	621–23	1	10	D	D	36	7
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	NA	NA	NA	D	D	85
All companies (number of domestic employees)	–	61,475	54,066	59,162	69,251	72,157	73,100
Small companies ^a							
5–499	–	4,915	4,168	4,207	4,056	3,613	4,170
5–99	–	2,002	1,609	1,605	1,444	1,095	1,522
5–49	–	1,027	1,101	917	905	467 i	1,177
5–9	–	NA	NA	178	83	99 i	52 i
10–24	–	NA	NA	425	535	123	685

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25–49	–	658	419	314	287	246 i	440
50–99	–	976	509	688 i	539	628	344
100–249	–	1,735	1,574	1,358 i	1,051	1,212	1,275
250–499	–	1,178	985	1,245	1,561	1,306	1,373
Medium and large companies							
500–999	–	1,753	1,992	1,741	1,396	1,455	1,656
1,000–4,999	–	11,350	10,403	11,674	12,691	12,419	13,580
5,000–9,999	–	7,000	5,692	6,907	8,126	10,298	10,836
10,000–24,999	–	11,785	10,442	8,856	12,485	10,317	9,782
25,000 or more	–	24,671	21,368	25,777	30,497	34,056	33,076

* = 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; NA = not available.

NAICS = 2007 North American Industry Classification System. For survey year 2008, industry classification was based on the 2002 NAICS. Beginning with survey year 2011, the composition of the other nonmanufacturing industry changed.

^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.