

TABLE 4. Domestic 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	290,680	282,505	279,289	290,240	302,759	322,528
Manufacturing industries	31–33	203,755	196,441	199,147	202,363	208,577	221,476
Food	311	2,100	4,099	D	4,393	4,087	5,028
Beverage and tobacco products	312	780	477	D	D	D	827
Textile, apparel, and leather products	313–16	815	439	482	608	553	662
Wood products	321	273	280	252	211	280	220
Paper	322	NA	NA	1,341	676	752	920
Printing and related support activities	323	349	210	231	181	256 i	252 i
Petroleum and coal products	324	NA	NA	D	D	888	242
Chemicals	325	58,250	54,753	58,343	55,853	56,748	61,664
Basic chemicals	3251	NA	NA	1,810	D	2,705	2,658
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	NA	NA	783	798	997	1,065
Pesticide, fertilizer, and other agricultural chemicals	3253	NA	NA	D	D	D	1,691 i
Pharmaceuticals and medicines	3254	48,131	46,415	49,469	46,308	47,851	52,426
Soap, cleaning compound, and toilet preparation	3256	NA	NA	2,400	2,476	2,342	2,469
Paint, coating, adhesive, and other chemicals	3255, 3259	NA	NA	D	1,290	D	1,355
Plastics and rubber products	326	1,817	2,388	2,129	2,278	3,585	3,650
Nonmetallic mineral products	327	1,556	1,098 i	1,314 i	1,175	1,327 i	1,329 i
Primary metals	331	695	863	681	655	741	624
Fabricated metal products	332	2,419	2,057	1,727	1,857	1,827 i	2,212 i
Machinery	333	10,104	9,226	10,260	14,725	13,752	12,650
Agricultural implement	33311	NA	NA	1,345	1,277	1,546	1,597
Semiconductor machinery	333295	NA	NA	2,173	2,351	1,291	3,194
Engine, turbine, and power transmission equipment	3336	NA	NA	1,430	4,273	4,336	1,448
Other machinery	other 333	NA	NA	5,312	6,824	6,579	6,411
Computer and electronic products	334	60,464	55,856	61,623	62,438	66,290	67,205
Communications equipment	3342	NA	NA	13,875	12,335	14,352	15,658
Semiconductor and other electronic components	3344	22,324	20,023	23,011	24,237	28,218	30,800
Navigational, measuring, electromedical, and control instruments	3345	15,460	14,318	15,747	15,852	15,918	14,478
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	NA	NA	4,189	4,430	4,413	2,634
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	NA	NA	8,293	8,066	7,734	8,106
Other measuring and controlling device	other 3345	NA	NA	3,265	3,356	3,772	3,738
Other computer and electronic products	other 334	NA	NA	8,990	10,014	7,801	6,269
Electrical equipment, appliances, and components	335	3,143	3,317	3,320	3,624	3,078	4,136
Transportation equipment	336	50,552	48,209	42,940	41,094	42,340	45,972
Automobiles, bodies, trailers, and parts	3361, 3362, 3363	NA	NA	D	D	D	16,729
Aerospace products and parts	3364	36,941	34,563	29,857	26,086 i	24,874 i	27,114
Aircraft, aircraft engine, and aircraft parts	336411–13	NA	NA	24,777 i	24,839 i	23,454 i	D

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Guided missile, space vehicle, and related parts	336414–15, 336419	NA	NA	5,080	1,247	1,420	D
Military armored vehicle, tank, and tank components	336992	NA	NA	D	51	D	9 i
Other transportation	other 336	NA	NA	D	D	D	2,121
Furniture and related products	337	477	395	374	319	360	374
Miscellaneous manufacturing	339	NA	NA	D	D	D	13,509
Medical equipment and supplies	3391	NA	NA	6,459	7,796	8,333	10,954
Other miscellaneous manufacturing	3399	NA	NA	D	D	D	2,555
Nonmanufacturing industries	21–23, 42–81	86,926	86,064	80,142	87,877	94,183	101,052
Mining, extraction, and support activities	21	NA	NA	2,545	2,365	3,031	3,997
Utilities	22	NA	NA	425	358	348	294
Wholesale trade	42	NA	NA	1,092	1,556 i	2,053 i	529 i
Electronic shopping and electronic auctions	454111–12	NA	NA	D	949 i	1,353	1,357 i
Transportation and warehousing	48–49	NA	NA	95	132	178	D
Information	51	37,695	35,953	37,088	42,697	46,900	57,207
Publishing	511	28,427	26,838	26,957	28,411	29,067	35,675
Newspaper, periodical, book, and directory publishers	5111	NA	NA	770	372	219 i	342 i
Software publishers	5112	NA	NA	26,187	28,039	28,848	35,333
Telecommunications	517	1,684	1,523	1,912	2,169	2,729 i	3,041
Data processing, hosting, and related services	518	6,567	2,741	2,753	5,111	4,914	6,446
Other information	other 51	1,016	4,850	5,466	7,006	10,190	12,046
Finance and insurance	52	NA	NA	2,101	3,447	3,530	4,308
Real estate and rental and leasing	53	NA	NA	330	343	363	150
Lessors of nonfinancial intangible assets (except copyrighted works)	533	NA	NA	NA	324	342	58 i
Other real estate and rental and leasing	other 53	NA	NA	NA	19	21 i	92
Professional, scientific, and technical services	54	37,954	42,380	31,798	33,307	34,121	31,017
Architectural, engineering, and related services	5413	3,422	3,258	4,008	3,114	2,483 i	3,133
Computer systems design and related services	5415	12,146	13,351	10,359	10,938	11,006 i	9,268 i
Scientific research and development services	5417	17,913	16,402	13,712	15,713	16,415	14,201
Biotechnology research and development	541711	NA	7,809	5,537	7,043	7,387	4,499
Physical, engineering, and life sciences (except biotechnology) research and development	541712	NA	7,916	7,628	8,058	8,431	8,910
Social sciences and humanities research and development	541720	NA	676	547	612	598	792
Other professional, scientific, and technical services	other 54	4,474	9,370	3,720	3,542	4,216	4,415
Health care services	621–23	NA	NA	1,049	542	672 i	526 i
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	NA	NA	NA	2,181	1,635	D
All companies (number of domestic employees)	–	290,680	282,505	279,289	290,240	302,759	322,528
Small companies ^a							
5–499	–	58,137	58,113	51,438	53,355	49,973	53,002
5–99	–	33,257	33,991	29,613	28,039	26,132 i	27,148 i

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5–49	–	23,906	20,715	20,832	18,744	17,032 i	18,238 i
5–9	–	NA	NA	3,614	4,060	2,926 i	3,402 i
10–24	–	NA	NA	8,658	6,657	6,905 i	6,895 i
25–49	–	9,626	9,434	8,560	8,027	7,200 i	7,941 i
50–99	–	9,351	13,277	8,781	9,295	9,100 i	8,910
100–249	–	14,662	12,791	11,631	12,303	12,454	13,666
250–499	–	10,219	11,330	10,194	13,013	11,387	12,189
Medium and large companies							
500–999	–	11,886	10,131	10,053	9,993	11,499	12,002
1,000–4,999	–	46,336	44,197	49,108	51,110	50,311	55,517
5,000–9,999	–	24,764	21,769	27,546	24,452	30,708	31,514
10,000–24,999	–	48,737	51,239	41,853	49,107	50,226	51,218
25,000 or more	–	100,820	97,056	99,291	102,222	110,042	119,275

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.