

TABLE 28. Domestic R&D paid for by others and performed by the company and others as a percentage of domestic net sales, by industry and company size: 2012

Industry and company size	NAICS code	Domestic R&D (US\$millions)	Percent	
			Domestic sales of R&D performers and funders ^a	Domestic sales of R&D performers ^b
All industries	21–23, 31–33, 42–81	66,778	0.7	0.7
Manufacturing industries	31–33	47,578	0.9	0.9
Food	311	180	*	*
Beverage and tobacco products	312	D	D	D
Textile, apparel, and leather products	313–16	24	*	*
Wood products	321	9	*	*
Paper	322	10	*	*
Printing and related support activities	323	4 i	*	*
Petroleum and coal products	324	19	*	*
Chemicals	325	9,102	0.7	0.8
Basic chemicals	3251	387 i	0.1	0.1
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	102	0.1	0.1
Pesticide, fertilizer, and other agricultural chemical	3253	D	D	D
Pharmaceuticals and medicines	3254	8,272	2.2	2.2
Soap, cleaning compound, and toilet preparation	3256	5 i	*	*
Paint, coating, adhesive, and other chemicals	3255, 3259	D	D	D
Plastics and rubber products	326	350 i	0.2	0.2
Nonmetallic mineral products	327	38	0.1	0.1
Primary metals	331	59	*	*
Fabricated metal products	332	118 i	0.1	0.1
Machinery	333	1,149	0.3	0.3
Agricultural implement	33311	D	D	D
Semiconductor machinery	333295	74	0.6	0.6
Engine, turbine, and power transmission equipment	3336	D	D	D
Other machinery	other 333	269	0.1	0.1
Computer and electronic products	334	8,849	1.3	1.3
Communications equipment	3342	1,510 i	0.9	0.9
Semiconductor and other electronic components	3344	1,433	1.1	1.1
Navigational, measuring, electromedical, and control instruments	3345	5,670	2.5	2.6
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	239	0.4	0.4
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	5,243	6.1	6.1
Other measuring and controlling device	other 3345	189 i	0.3	0.3
Other computer and electronic products	other 334	236	0.2	0.2
Electrical equipment, appliances, and components	335	191	0.2	0.2
Transportation equipment	336	26,855 i	2.9	3.0
Automobiles, bodies, trailers, and parts	3361–63	D	D	D
Aerospace products and parts	3364	23,408 i	9.5	9.5
Aircraft, aircraft engine, and aircraft parts	336411–13	22,424 i	9.7	9.7
Guided missile, space vehicle, and related parts	336414–15, 336419	985 i	6.1	6.1
Military armored vehicle, tank, and tank component	336992	D	D	D
Other transportation	other 336	D	D	D
Furniture and related products	337	* i	*	*
Miscellaneous manufacturing	339	D	D	D
Medical equipment and supplies	3391	456	0.2	0.2
Other miscellaneous manufacturing	3399	D	D	D
Nonmanufacturing industries	21–23, 42–81	19,201	0.5	0.5
Mining, extraction, and support activities	21	D	D	D
Utilities	22	130	*	0.1
Wholesale trade	42	250 i	0.1	0.1
Electronic shopping and electronic auctions	454111–12	6 i	*	*
Transportation and warehousing	48–49	1	*	*
Information	51	965	0.1	0.1
Publishing	511	737	0.2	0.2
Newspaper, periodical, book, and directory publishers	5111	1 i	*	*

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Software publishers	5112	737	0.3	0.3
Telecommunications	517	59	*	*
Data processing, hosting, and related services	518	116	0.1	0.1
Other information	other 51	52 i	0.1	0.1
Finance and insurance	52	12	*	*
Real estate and rental and leasing	53	4	*	*
Lessors of nonfinancial intangible assets (except copyrighted works)	533	4	0.2	0.2
Other real estate and rental and leasing	other 53	0		
Professional, scientific, and technical services	54	16,447	4.8	4.8
Architectural, engineering, and related services	5413	1,730 i	2.4	2.4
Computer systems design and related services	5415	2,197	1.8	1.8
Scientific research and development services	5417	11,549	16.2	16.2
Biotechnology research and development	541711	3,675	18.7	18.8
Physical, engineering, and life sciences (except biotechnology) research and development	541712	7,166	14.2	14.1
Social sciences and humanities research and development	541720	709	70.0	70.0
Other professional, scientific, and technical services	other 54	972	1.3	1.3
Health care services	621–23	268 i	0.5	0.5
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	D	D	D
All companies (number of domestic employees)	–	66,778	0.7	0.7
Small companies ^c				
5–499	–	12,165	1.1	1.2
5–99	–	7,214 i	1.7	1.7
5–49	–	5,010 i	1.8	1.8
5–9	–	1,053 i	2.5	2.5
10–24	–	2,224 i	2.4	2.4
25–49	–	1,733	1.2	1.2
50–99	–	2,204 i	1.4	1.4
100–249	–	3,012	0.9	0.9
250–499	–	1,939	0.7	0.8
Medium and large companies				
500–999	–	1,324	0.4	0.4
1,000–4,999	–	9,845	0.8	0.8
5,000–9,999	–	7,791	0.7	0.7
10,000–24,999	–	7,087	0.4	0.5
25,000 or more	–	28,567 i	0.8	0.8

* = amount < \$500,000 or less than 0.05%; 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 Statistics used for the denominator in the calculation of these percentages are representative of companies located in the United States that performed or funded R&D.

^b Statistics used for the denominator in the calculation of these percentages are representative of companies located in the United States that performed R&D.

^c 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, unless indicated otherwise. Percentages are calculated as domestic R&D paid for by others, divided by domestic sales.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, and U.S. Census Bureau, Business R&D and Innovation Survey, 2012.