

TABLE 16. Domestic R&D paid for by the company and others and performed by the company, by business activity: 2012  
(Millions of U.S. dollars)

Business activity <sup>a</sup>	Business code <sup>b</sup>	Total	Paid for by the company	Paid for by others
All business activities	21100-81000	302,250	247,280	54,970
Oil and gas extraction	21100	D	880	D
Mining	21200	79	67	12
Support activities for mining, including oil and gas	21300	1,678	1,405	273
Utilities	22100	434	332	103
Construction	23000	760	220	540
Food manufacturing	31100	3,569	3,442	127
Beverage manufacturing	31210	D	440	D
Tobacco manufacturing	31220	140	137	4
Textile, apparel, and leather products manufacturing	31990	695	672	23
Wood products manufacturing	32100	459 i	451 i	8
Paper manufacturing	32200	982	972	10
Printing and related support activities	32300	305 i	302 i	3 i
Petroleum refineries	32401	602	542	60
Asphalt paving, roofing, and saturated materials manufacturing	32402	41	41	* i
Other petroleum and coal products manufacturing, including motor oil, hydraulic fluid, and charcoal	32403	218	217	2
Basic chemicals manufacturing	32510	3,285	2,930	355 i
Resin, synthetic rubber, and artificial synthetic fibers and filaments manufacturing	32520	1,042	945	97
Pesticide, fertilizer, and other agricultural chemical manufacturing	32530	1,969	1,646	323
Pharmaceutical, medicinal, botanical, and biological products (except diagnostic) manufacturing	32541	43,967	38,864	5,103
In vitro diagnostic substances manufacturing	32542	1,041 i	1,005 i	35
Soap, cleaning compound, and toilet preparations manufacturing	32591	2,261	2,242	19
Paint, adhesive, and other chemical manufacturing	32592	1,604	1,567	37 i
Plastics and rubber products manufacturing	32600	3,200	2,854	346 i
Clay and glass products manufacturing	32710	987 i	957 i	30 i
Cement, concrete, lime, gypsum, and other nonmetallic mineral product manufacturing	32790	367	360	7
Primary metal manufacturing	33100	750	695	55
Fabricated metal products manufacturing	33200	2,243	2,086	156 i
Agricultural machinery and equipment manufacturing	33311	1,175	1,136	40
Construction machinery manufacturing	33312	675	665	10
Mining, oil, and gas field machinery and equipment manufacturing	33319	1,999	1,975	24
Semiconductor machinery manufacturing	33321	2,115	2,042	73 i
Industrial machinery manufacturing, except semiconductor machinery	33322	824	781	42 i
Photographic and photocopying equipment manufacturing	33331	18 i	18 i	*
Commercial, service industry, temperature control, and air-flow control machinery manufacturing	33332	943	925	18
Engine, turbine, and power transmission equipment manufacturing	33360	3,603	3,248	355
Metalworking and other general-purpose machinery manufacturing	33390	1,600	1,452	148 i
Computers and peripheral equipment manufacturing and magnetic and optical media	33412	10,893	10,688	205
Telephone apparatus manufacturing, including routers, modems, and gateways	33421	5,101	5,074	26
Radio, television, and wireless communication equipment manufacturing	33422	5,479	4,075	1,405 i
Other communication equipment manufacturing, except radio, television, and wireless communication equipment	33429	1,937	1,870	67
Audio and video equipment manufacturing	33430	864	846	18
Semiconductor and other electronic components manufacturing	33440	28,096	26,707	1,390
Electromedical, electrotherapeutic, and irradiation apparatus manufacturing	33451	2,851 i	2,756 i	95
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments manufacturing	33452	6,405	1,984	4,422
Measuring and control instruments manufacturing (not listed elsewhere)	33459	3,516	3,352	163 i

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Electrical equipment, appliances, and components manufacturing	33500	3,427	3,218	208
Motor vehicles manufacturing	33610	11,314	10,016	1,298
Motor vehicle body and trailer manufacturing	33620	88 i	88 i	* i
Motor vehicle parts manufacturing	33630	D	2,858	D
Aircraft manufacturing	33641	7,366 i	4,490 i	2,876 i
Aircraft engine and engine parts manufacturing	33642	1,295	703	592
Other aircraft parts and auxiliary equipment manufacturing	33643	2,623	1,683	940
Guided missiles, space vehicles, and parts manufacturing	33644	2,850	577 i	2,273
Railroad rolling stock manufacturing	33651	177	172	4 i
Ship and boat building	33660	D	D	D
Motorcycle, bicycle, and parts manufacturing	33691	176 i	175 i	1 i
Military armored vehicle, tank, and tank component manufacturing	33692	122	100	22
All other transportation equipment manufacturing	33699	D	357	D
Furniture and related products manufacturing	33700	371	370	* i
Medical equipment and supplies manufacturing	33910	10,683	10,265	418
Miscellaneous manufacturing (not listed elsewhere: games, office supplies, slot machines, etc.)	33990	D	2,477	D
Merchant wholesalers, durable goods	42300	1,282 i	1,072 i	211 i
Merchant wholesalers, nondurable goods	42400	653 i	588 i	65 i
Wholesale electronic markets and agents and brokers (business to business)	42500	182 i	167 i	15 i
Retail trade, except electronic shopping and electronic auctions	44000	101 i	97 i	4 i
Electronic shopping and electronic auctions	45411	1,239	1,232	6 i
Transportation	48000	D	168	D
Couriers, messengers, and express delivery services	49200	D	D	0
Warehousing and storage	49300	15	12	3
Newspaper, periodical, book, and directory publishers (except Internet)	51110	242 i	242 i	1 i
Software publishers (except Internet)	51120	23,700	23,316	385
Motion picture and sound recording (except Internet)	51200	73 i	48	25 i
Broadcasting (except Internet)	51500	36	36	0
Wired telecommunications carriers	51710	935	935	* i
Wireless telecommunications carriers (except satellite)	51720	125	124	1 i
Satellite telecommunications	51740	191	122	69
Other telecommunications (not listed elsewhere)	51790	383	338	44
Data processing, hosting, and related services	51800	4,407	4,322	85 i
Other information services, including Internet publishing, broadcasting, and Web search portals	51910	11,289	11,268	21
Finance: banking and credit intermediation	52200	1,601	1,600	1
Securities, commodity contracts, and other financial investments and related activities (including funds and trusts)	52310	893	886	6
Insurance carriers and related activities	52400	1,141	1,133	8
Real estate	53100	26 i	26 i	0
Rental and leasing services	53200	D	48	D
Lessors of nonfinancial intangible assets (including patent licensing)	53300	369	369	* i
Legal, accounting, tax preparation, bookkeeping, and payroll services	54111	417 i	412 i	6 i
Architectural, engineering, and related services	54130	4,236 i	1,180	3,056 i
Specialized design services	54140	207 i	155 i	52
Computer systems design and related services	54150	12,224 i	10,217 i	2,007
Management, scientific, and technical consulting services	54160	2,280	1,638 i	642
Research and development services in social sciences and humanities	54172	601	23 i	578
Research and development services in biotechnology	54173	7,156	4,491	2,665
Research and development services in physical, engineering, and life sciences (except biotechnology)	54174	9,836	2,946	6,890
Advertising and related services	54180	386 i	373 i	13
Professional, scientific, and technical services (not listed elsewhere)	54190	2,240 i	968	1,272 i
Management of companies and enterprises	55100	40	15	25
Administrative and support services	56100	425	391	34
Waste management and remediation services	56200	D	D	D

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Offices of physicians	62110	76 i	29 i	46 i
Medical and diagnostic laboratories	62150	1,027	341	686
Other ambulatory health care services (ambulance, dental, home health care)	62199	41 i	37 i	4
Hospitals and nursing care facilities	62200	2 i	2 i	0
Social assistance services	62400	36	36	0
Arts, entertainment, and recreation	71000	108	64	44
Accommodation and food services	72000	131 i	131 i	0
Other services (not listed elsewhere)	81000	570	408	161
Undistributed	-	10,725 i	1,657 i	9,068 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.

<sup>a</sup> Data are tabulated independent of the industry classification of the company. Companies were asked to report their sales and R&D activity in one or more business activity codes.

<sup>b</sup> Business codes and descriptions are based on 2007 NAICS industry definitions.

NOTES: Detail may not add to total because of rounding. 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.