

TABLE 6. Worldwide R&D paid for by the company and performed by the company and others, by business activity: 2012
(Millions of U.S. dollars)

Business activity ^a	Business code ^b	Amount
All business activities	21100–81000	352,853
Oil and gas extraction	21100	D
Mining	21200	81
Support activities for mining, including oil and gas	21300	1,589
Utilities	22100	686
Construction	23000	397 i
Food manufacturing	31100	4,685
Beverage manufacturing	31210	641
Tobacco manufacturing	31220	662
Textile, apparel, and leather products manufacturing	31990	765
Wood products manufacturing	32100	D
Paper manufacturing	32200	1,362
Printing and related support activities	32300	356 i
Petroleum refineries	32401	808
Asphalt paving, roofing, and saturated materials manufacturing	32402	45
Other petroleum and coal products manufacturing, including motor oil, hydraulic fluid, and charcoal	32403	382
Basic chemicals manufacturing	32510	4,344
Resin, synthetic rubber, and artificial synthetic fibers and filaments manufacturing	32520	1,361
Pesticide, fertilizer, and other agricultural chemical manufacturing	32530	2,307
Pharmaceutical, medicinal, botanical, and biological products (except diagnostic) manufacturing	32541	69,446
In vitro diagnostic substances manufacturing	32542	1,337 i
Soap, cleaning compound, and toilet preparations manufacturing	32591	3,266
Paint, adhesive, and other chemical manufacturing	32592	2,054
Plastics and rubber products manufacturing	32600	3,632
Clay and glass products manufacturing	32710	1,154 i
Cement, concrete, lime, gypsum, and other nonmetallic mineral product manufacturing	32790	621
Primary metal manufacturing	33100	882
Fabricated metal products manufacturing	33200	2,523
Agricultural machinery and equipment manufacturing	33311	1,893
Construction machinery manufacturing	33312	816
Mining, oil, and gas field machinery and equipment manufacturing	33319	2,589
Semiconductor machinery manufacturing	33321	2,637
Industrial machinery manufacturing, except semiconductor machinery	33322	988
Photographic and photocopying equipment manufacturing	33331	20 i
Commercial, service industry, temperature control, and air-flow control machinery manufacturing	33332	1,340
Engine, turbine, and power transmission equipment manufacturing	33360	4,068
Metalworking and other-general-purpose machinery manufacturing	33390	1,918
Computers and peripheral equipment manufacturing and magnetic and optical media	33412	14,716
Telephone apparatus manufacturing, including routers, modems, and gateways	33421	9,335
Radio, television, and wireless communication equipment manufacturing	33422	4,856
Other communication equipment manufacturing, except radio, television, and wireless communication equipment	33429	2,111
Audio and video equipment manufacturing	33430	1,080
Semiconductor and other electronic components manufacturing	33440	36,698
Electromedical, electrotherapeutic, and irradiation apparatus manufacturing	33451	3,477
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments manufacturing	33452	2,336
Measuring and control instruments manufacturing (not listed elsewhere)	33459	4,916
Electrical equipment, appliances, and components manufacturing	33500	4,816
Motor vehicles manufacturing	33610	18,362
Motor vehicle body and trailer manufacturing	33620	96 i
Motor vehicle parts manufacturing	33630	4,742

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Aircraft manufacturing	33641	4,714 i
Aircraft engine and engine parts manufacturing	33642	D
Other aircraft parts and auxiliary equipment manufacturing	33643	3,087
Guided missiles, space vehicles, and parts manufacturing	33644	659
Railroad rolling stock manufacturing	33651	237
Ship and boat building	33660	143 i
Motorcycle, bicycle, and parts manufacturing	33691	197
Military armored vehicle, tank, and tank component manufacturing	33692	135
All other transportation equipment manufacturing	33699	437
Furniture and related products manufacturing	33700	418
Medical equipment and supplies manufacturing	33910	14,237
Miscellaneous manufacturing (not listed elsewhere: games, office supplies, slot machines, etc.)	33990	D
Merchant wholesalers, durable goods	42300	1,295 i
Merchant wholesalers, nondurable goods	42400	699 i
Wholesale electronic markets and agents and brokers (business to business)	42500	173 i
Retail trade, except electronic shopping and electronic auctions	44000	100 i
Electronic shopping and electronic auctions	45411	1,749
Transportation	48000	199
Couriers, messengers, and express delivery services	49200	D
Warehousing and storage	49300	17
Newspaper, periodical, book, and directory publishers (except Internet)	51110	268 i
Software publishers (except Internet)	51120	31,083
Motion picture and sound recording (except Internet)	51200	67
Broadcasting (except Internet)	51500	165 i
Wired telecommunications carriers	51710	990
Wireless telecommunications carriers (except satellite)	51720	140
Satellite telecommunications	51740	145
Other telecommunications (not listed elsewhere)	51790	399
Data processing, hosting, and related services	51800	4,882
Other information services, including Internet publishing, broadcasting, and Web search portals	51910	12,889
Finance: banking and credit intermediation	52200	2,454
Securities, commodity contracts, and other financial investments and related activities (including funds and trusts)	52310	1,110
Insurance carriers and related activities	52400	1,429
Real estate	53100	27
Rental and leasing services	53200	59
Lessors of nonfinancial intangible assets (including patent licensing)	53300	437
Legal, accounting, tax preparation, bookkeeping, and payroll services	54111	535
Architectural, engineering, and related services	54130	1,264
Specialized design services	54140	157 i
Computer systems design and related services	54150	13,450 i
Management, scientific, and technical consulting services	54160	2,069 i
Research and development services in social sciences and humanities	54172	64
Research and development services in biotechnology	54173	6,305
Research and development services in physical, engineering, and life sciences (except biotechnology)	54174	3,611
Advertising and related services	54180	384 i
Professional, scientific, and technical services (not listed elsewhere)	54190	1,199
Management of companies and enterprises	55100	18
Administrative and support services	56100	618 i
Waste management and remediation services	56200	D
Offices of physicians	62110	43 i
Medical and diagnostic laboratories	62150	364
Other ambulatory health care services (ambulance, dental, home health care)	62199	45 i
Hospitals and nursing care facilities	62200	2 i

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Social assistance services	62400	36
Arts, entertainment, and recreation	71000	70
Accommodation and food services	72000	149 i
Other services (not listed elsewhere)	81000	501
Undistributed	-	1,896 i

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 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.

^b 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.