

TABLE 6

Worldwide R&D paid for by the company and performed by the company and others, by business activity: 2015

(Millions of U.S. dollars)

Business activity ^a	Business code ^b	Amount
All business activities	21100-81000	412,345
Oil and gas extraction	21100	1,486
Mining	21200	71
Support activities for mining, including oil and gas	21300	1,833
Utilities	22100	725
Construction	23000	699
Food manufacturing	31100	6,407
Beverage manufacturing	31210	724
Tobacco manufacturing	31220	681
Textile, apparel, and leather products manufacturing	31990	840
Wood products manufacturing	32100	251
Paper manufacturing	32200	1,429
Printing and related support activities	32300	321
Petroleum refineries	32401	526
Asphalt paving, roofing, and saturated materials manufacturing	32402	75
Other petroleum and coal products manufacturing, including motor oil, hydraulic fluid, and charcoal	32403	416
Basic chemicals manufacturing	32510	3,506
Resin, synthetic rubber, and artificial synthetic fibers and filaments manufacturing	32520	1,704
Pesticide, fertilizer, and other agricultural chemical manufacturing	32530	D
Pharmaceutical, medicinal, botanical, and biological products (except diagnostics)	32541	64,451
In vitro diagnostic substances manufacturing	32542	972
Biotechnology-based pharmaceutical and biological products (except diagnostics)	32543	22,997
Soap, cleaning compound, and toilet preparations manufacturing	32591	2,473
Paint, adhesive, and other chemical manufacturing	32592	D
Plastics and rubber products manufacturing	32600	3,247
Clay and glass products manufacturing	32710	1,145
Cement, concrete, lime, gypsum, and other nonmetallic mineral products manufacturing	32790	601
Primary metal manufacturing	33100	716
Fabricated metal products manufacturing	33200	2,365
Agricultural machinery and equipment manufacturing	33311	1,916
Construction machinery manufacturing	33312	1,561
Mining, oil, and gas field machinery and equipment manufacturing	33319	2,131
Semiconductor machinery manufacturing	33321	3,459
Industrial machinery manufacturing (except semiconductor machinery)	33322	1,188
Photographic and photocopying equipment manufacturing	33331	115
Commercial, service industry, temperature control, and air-flow control machinery manufacturing	33332	1,854
Digital cameras manufacturing	33333	510
Engine, turbine, and power transmission equipment manufacturing	33360	2,628
Metalworking and other general purpose machinery manufacturing	33390	2,725
Computers and peripheral equipment manufacturing and magnetic and optical media	33412	16,547
Telephone apparatus manufacturing, including routers, modems, and gateways	33421	12,366
Radio, television, and wireless communication equipment manufacturing	33422	3,542
Other communication equipment manufacturing (except radio, television, and wireless communication equipment)	33429	1,844
Audio and video equipment manufacturing	33430	1,588
Semiconductor and other electronic components manufacturing	33440	39,810
Electromedical, electrotherapeutic, and irradiation apparatus manufacturing	33451	3,942
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments manufacturing	33452	2,034
Measuring and control instruments manufacturing (not listed elsewhere)	33459	5,466
Electrical equipment, appliances, and components manufacturing	33500	5,249
Motor vehicles manufacturing	33610	18,362
Motor vehicle body and trailer manufacturing	33620	160
Motor vehicle parts manufacturing	33630	7,279

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Aircraft manufacturing	33641	4,850
Aircraft engine and engine parts manufacturing	33642	D
Other aircraft parts and auxiliary equipment manufacturing	33643	3,483
Guided missiles, space vehicles, and related parts manufacturing	33644	1,034
Railroad rolling stock manufacturing	33651	310
Ship and boat building	33660	251
Motorcycle, bicycle, and parts manufacturing	33691	320
Military armored vehicle, tank, and tank components manufacturing	33692	203
All other transportation equipment manufacturing	33699	430
Furniture and related products manufacturing	33700	509
Medical equipment and supplies manufacturing	33910	15,158
Miscellaneous manufacturing not listed elsewhere (games, office supplies, slot machines, etc.)	33990	D
Merchant wholesalers, durable goods	42300	1,634
Merchant wholesalers, nondurable goods	42400	483
Wholesale electronic markets and agents and brokers (business to business)	42500	33
Retail trade (except electronic shopping and electronic auctions)	44000	114
Electronic shopping and electronic auctions	45411	D
Transportation	48000	242
Couriers, messengers, and express delivery services	49200	D
Warehousing and storage	49300	D
Newspaper, periodical, book, and directory publishers (except Internet)	51110	117
Software publishers (except Internet)	51120	36,038
Motion picture and sound recording (except Internet)	51200	12
Broadcasting (except Internet)	51500	240
Wired telecommunications carriers	51710	663
Wireless telecommunications carriers (except satellite)	51720	2,035
Satellite telecommunications	51740	577
Other telecommunications (not listed elsewhere)	51790	493
Data processing, hosting, and related services	51800	6,963
Cloud computing applications and Internet-based software services	51801	6,814
Other information services, including Internet publishing, broadcasting, and Web search portals	51910	25,328
Finance: banking and credit intermediation	52200	3,302
Securities, commodity contracts, and other financial investments and related activities, including funds and trusts	52310	1,527
Insurance carriers and related activities	52400	1,574
Real estate	53100	288
Rental and leasing services	53200	81
Lessors of nonfinancial intangible assets, including patent licensing	53300	104
Legal, accounting, tax preparation, bookkeeping, and payroll services	54111	1,588
Architectural, engineering, and related services	54130	2,449
Specialized design services	54140	13
Computer systems design and related services	54150	14,090
Management, scientific, and technical consulting services	54160	1,530
Research and development services in social sciences and humanities	54172	15
Research and development services in biotechnology	54173	2,414
Research and development services in physical, engineering, and life sciences (except biotechnology)	54174	3,210
Advertising and related services	54180	453
Professional, scientific, and technical services (not listed elsewhere)	54190	860
Management of companies and enterprises	55100	D
Administrative and support services	56100	369
Waste management and remediation services	56200	D
Offices of physicians	62110	28
Medical and diagnostic laboratories	62150	424

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Other ambulatory health care services (ambulance, dental, home health care)	62199	39
Hospitals and nursing care facilities	62200	4
Social assistance services	62400	2
Arts, entertainment, and recreation	71000	51
Accommodation and food services	72000	97
Other services (not listed elsewhere)	81000	732
Undistributed	-	0

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 = 2012 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 2012 NAICS industry definitions.

Note(s)

Detail may not add to total because of rounding. 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.

Source(s)

National Science Foundation, National Center for Science and Engineering Statistics, and U.S. Census Bureau, Business R&D and Innovation Survey, 2015.