

TABLE 60. Worldwide R&D paid for by others and performed by the company and others, by business activity: 2009
(Millions of U.S. dollars)

Business activity	Business code ^a	Amount
All business activities	21100-81390	76,426
Oil and gas extraction	21100	D
Coal mining	21210	0
Metal ore mining	21220	0
Nonmetallic mineral mining and quarrying	21230	1 i
Support activities for solid mineral operations	21310	0
Support activities for oil and gas operations	21320	D
Electric power generation, transmission, and distribution	22110	112
Natural gas distribution	22120	0
Water, sewage, and other systems	22130	1 i
Construction of buildings	23600	* i
Heavy and civil engineering construction	23700	0
Specialty trade contractors	23800	5 i
Food	31100	136 i
Beverage	31210	* i
Tobacco	31220	2
Textile mill products	31300	2 i
Textile product mills	31400	3 i
Apparel	31500	D
Leather and allied products	31600	* i
Wood products	32100	2 i
Paper	32200	14 i
Printing and related support activities	32300	* i
Petroleum and coal products	32400	D
Basic chemicals	32510	146
Resin, synthetic rubber, and artificial synthetic fibers and filaments	32520	25
Pesticide, fertilizer, and other agricultural chemical	32530	D
Pharmaceutical, medicinal, botanical, and biological products (except diagnostic)	32541	5,194
In-vitro diagnostic substances	32542	32 i
Soap, cleaning compound, and toilet preparation	32591	4 i
Paint, adhesive, and other chemical	32592	46 i
Plastics and rubber products	32600	149
Clay and glass products	32710	5 i
Cement, concrete, lime, gypsum, and other nonmetallic mineral product	32790	23 i
Iron and steel mills, ferroalloy, and steel product from purchased steel	33110	225
Nonferrous metals production and processing	33130	3 i
Ferrous and nonferrous foundries	33150	7
Fabricated metal products	33200	63 i
Farm machinery and equipment	33311	D i
Construction machinery	33312	6 i
Mining machinery and equipment	33313	14
Oil and gas field machinery and equipment	33314	2
Semiconductor machinery	33321	13 i
Industrial machinery, except semiconductor machinery	33322	66 i
Photographic and photocopying equipment	33331	1 i
Commercial, service industry, temperature control, and air-flow control machinery	33332	61
Engine, turbine, and power transmission equipment	33360	158
Metalworking and other general purpose machinery	33390	139
Computers and peripheral equipment	33410	337
Telephone apparatus	33421	91 i
Radio and television broadcasting and wireless communications equipment	33422	1,519 i
Communication equipment, except broadcasting, wireless, and telephone apparatus	33429	197
Audio and video equipment	33430	D i
Semiconductor and other electronic components	33440	670
Electromedical, electrotherapeutic and irradiation apparatus	33451	116 i
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	33452	3,242
Measuring and control instruments (not listed elsewhere)	33459	88 i
Manufacturing and reproducing magnetic and optical media	33460	D

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Electrical equipment, appliances, and components	33500	181 i
Motor vehicles	33610	370
Motor vehicle body and trailer	33620	D
Motor vehicle parts	33630	279
Aircraft	33641	18,878 i
Aircraft engine and engine parts	33642	978 i
Other aircraft parts and auxiliary equipment	33643	892
Guided missile, space vehicle, and related parts	33644	7,864
Railroad rolling stock	33651	2
Ship and boat building	33660	D
Motorcycle, bicycle, and parts	33691	* i
Military armored vehicle, tank, and tank components	33692	D
All other transportation equipment	33699	15 i
Furniture and related products	33700	3 i
Medical equipment and supplies	33910	75
Miscellaneous manufacturing (not listed elsewhere)	33990	218
Merchant wholesalers, durable goods	42300	52 i
Merchant wholesalers, nondurable goods	42400	6 i
Wholesale electronic markets and agents and brokers	42500	69
Motor vehicle and parts dealers	44100	0
Electronics and appliance stores	44300	0
Food and beverage stores	44500	0
Clothing and clothing accessories stores	44800	0
General merchandise stores	45200	0
Electronic shopping and mail-order houses	45410	0
Nonstore retailers, except electronic shopping and mail-order houses	45490	0
Retail trade stores, including gasoline stations (not listed elsewhere)	45990	0
Air transportation	48100	1 i
Rail transportation	48200	D
Water transportation	48300	0
Truck transportation	48400	0
Transit and ground passenger transportation	48500	0
Pipeline transportation of crude oil, refined petroleum, and miscellaneous products, except natural gas	48610	0
Pipeline transportation of natural gas	48620	0
Scenic and sightseeing transportation	48700	0
Support activities for transportation	48800	7
Couriers and messengers	49200	0
Warehousing and storage	49300	D
Newspaper, periodical, book, and directory publishers (except Internet)	51110	1 i
Software publishers (except Internet)	51120	389 i
Motion picture and sound recording (except Internet)	51200	0
Radio and television broadcasting (except Internet)	51510	0
Cable and other subscription programming (except Internet)	51520	0
Cable and other program distribution	51711	0
Broadband Internet service providers (e.g., cable, DSL)	51712	0
Wired telecommunications carriers (except cable and broadband Internet)	51713	* i
Wireless telecommunications carriers (except satellite)	51720	2 i
Satellite telecommunications	51740	D
Internet service providers using client-supplied telecommunications connections (e.g., dial-up, ISPs)	51791	0
Telecommunications services (not listed elsewhere)	51792	44
Data processing, hosting, and related services	51800	52 i
Internet publishing and broadcasting and Web search portals	51913	0
Information services (not listed elsewhere)	51919	8
Monetary authorities-central bank	52100	0
Depository credit intermediation	52210	0
Nondepository credit intermediation	52220	D
Activities related to credit intermediation	52230	0

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Business activity	Business code ^a	Amount
Securities, commodity contracts, and other financial investments and related activities	52300	0
Insurance carriers	52410	2 i
Agencies, brokerages, and other insurance-related activities	52420	6
Funds, trusts, and other financial vehicles	52500	0
Real estate	53100	0
Automotive equipment rental and leasing	53210	0
Consumer goods and general rental centers	53220	0
Commercial and industrial machinery and equipment rental and leasing	53240	2
Lessors of nonfinancial intangible assets	53300	0
Legal services	54110	0
Accounting, tax preparation, bookkeeping, and payroll services	54120	0
Architectural, engineering, and related services	54130	2,245 i
Specialized design services	54140	212
Computer systems design and related services	54150	1,515 i
Management, scientific, and technical consulting services	54160	5,713 i
R&D services in social sciences and humanities	54172	752
R&D services in biotechnology	54173	3,992
R&D services in physical, engineering, and life sciences (except biotechnology)	54174	8,704
Advertising and related services	54180	3 i
Professional, scientific, and technical services (not listed elsewhere)	54190	646
Management of companies and enterprises	55100	1
Business support services	56140	*
Travel arrangement and reservation services	56150	0
Investigation, security, and services to buildings and dwellings	56160	13 i
Office administrative, facilities, employment, and other support services	56190	131 i
Waste collection, treatment, and disposal	56210	* i
Remediation and other waste management services	56290	0
Educational services	61100	D i
Offices of physicians	62110	209 i
Offices of dentists and other health practitioners	62120	0
Medical and diagnostic laboratories	62150	D
Home health care services	62160	1
Outpatient care centers and other ambulatory health care services	62190	1 i
General medical and surgical hospitals	62210	7
Psychiatric, substance abuse, and specialty hospitals	62220	0
Nursing and residential care facilities	62300	0
Social assistance (except child day care services)	62400	0
Performing arts, spectator sports, and related industries	71100	0
Amusement, gambling, and recreation industries	71300	0
Traveler accommodation services	72100	0
Food services and drinking places	72200	* i
Automotive repair and maintenance	81110	0
Repair and maintenance, except automotive	81190	0
Personal care, death care, laundry, and other personal services	81200	1 i
Religious, grantmaking, social advocacy, civic, and social organizations	81310	0
Business, professional, labor, political, and similar organizations	81390	0
Undistributed	-	4,496

* = amount < \$500,000; D = data withheld to avoid disclosing operations of individual companies; i = value > 50% of estimate is a combination of imputation and reweighting to account for nonresponse.

DSL = digital subscriber line; ISP = internet service provider.

^a Data tabulated independent of industry classification of company. Companies were asked to report their sales and R&D into one or more business codes. Business codes and descriptions based on 2007 North American Industry Classification System industry definitions.

NOTES: Detail may not add to total because of rounding. Statistics are representative of companies located in 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, 2009.