

TABLE 15

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

(Millions of U.S. dollars)

Business activity ^a	Business code ^b	Total	Paid for by the company	Paid for by others
All business activities	21100-81000	355,821	296,677	59,144
Oil and gas extraction	21100	D	1,056	D
Mining	21200	68	66 i	2
Support activities for mining, including oil and gas	21300	2,078	1,596 i	481
Utilities	22100	484	449	35
Construction	23000	520	516	3
Food manufacturing	31100	4,729 i	4,558 i	171
Beverage manufacturing	31210	660	550 i	110
Tobacco manufacturing	31220	153	151	2
Textile, apparel, and leather products manufacturing	31990	793	760	32
Wood products manufacturing	32100	227	219	8 i
Paper manufacturing	32200	1,056	1,053	3 i
Printing and related support activities	32300	287	280	7 i
Petroleum refineries	32401	443	429	14
Asphalt paving, roofing, and saturated materials manufacturing	32402	52 i	52 i	1 i
Other petroleum and coal products manufacturing, including motor oil, hydraulic fluid, and charcoal	32403	268	260	8
Basic chemicals manufacturing	32510	3,072	2,627	446 i
Resin, synthetic rubber, and artificial synthetic fibers and filaments manufacturing	32520	1,214	1,158	56 i
Pesticide, fertilizer, and other agricultural chemical manufacturing	32530	D	2,325	D
Pharmaceutical, medicinal, botanical, and biological products (except diagnostics)	32541	40,764	34,414	6,350
In vitro diagnostic substances manufacturing	32542	801	761	40
Biotechnology-based pharmaceutical and biological products (except diagnostics)	32543	14,464	12,550	1,914
Soap, cleaning compound, and toilet preparations manufacturing	32591	1,987	1,851	136
Paint, adhesive, and other chemical manufacturing	32592	D	1,401	D
Plastics and rubber products manufacturing	32600	2,903	2,728	175
Clay and glass products manufacturing	32710	949	938	10
Cement, concrete, lime, gypsum, and other nonmetallic mineral products manufacturing	32790	394 i	381 i	13
Primary metal manufacturing	33100	594 i	564 i	30 i
Fabricated metal products manufacturing	33200	2,400	2,101	299 i
Agricultural machinery and equipment manufacturing	33311	1,172	1,154	18 i
Construction machinery manufacturing	33312	1,213	1,209	4
Mining, oil, and gas field machinery and equipment manufacturing	33319	1,441	1,379	63
Semiconductor machinery manufacturing	33321	3,218	2,919	298 i
Industrial machinery manufacturing (except semiconductor machinery)	33322	1,149	1,041	108
Photographic and photocopying equipment manufacturing	33331	135	109	26
Commercial, service industry, temperature control, and air-flow control machinery manufacturing	33332	1,285	1,211	74
Digital cameras manufacturing	33333	427	425	2 i
Engine, turbine, and power transmission equipment manufacturing	33360	2,306	2,010	296
Metalworking and other general purpose machinery manufacturing	33390	2,290	2,105	185 i
Computers and peripheral equipment manufacturing and magnetic and optical media	33412	10,997	10,853	145
Telephone apparatus manufacturing, including routers, modems, and gateways	33421	9,529	9,526	3 i
Radio, television, and wireless communication equipment manufacturing	33422	3,387 i	1,969	1,418 i
Other communication equipment manufacturing (except radio, television, and wireless communication equipment)	33429	1,695 i	1,664 i	31
Audio and video equipment manufacturing	33430	1,072 i	1,050 i	21 i
Semiconductor and other electronic components manufacturing	33440	30,805	28,986	1,818
Electromedical, electrotherapeutic, and irradiation apparatus manufacturing	33451	3,477	3,227	251
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments manufacturing	33452	6,507	1,904	4,602
Measuring and control instruments manufacturing (not listed elsewhere)	33459	4,034	3,861	173

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Electrical equipment, appliances, and components manufacturing	33500	4,353	3,866	487 i
Motor vehicles manufacturing	33610	12,504	11,165	1,340
Motor vehicle body and trailer manufacturing	33620	156 i	151 i	5 i
Motor vehicle parts manufacturing	33630	6,140	5,137	1,003 i
Aircraft manufacturing	33641	14,779 i	4,644	10,136 i
Aircraft engine and engine parts manufacturing	33642	1,574	1,132	442
Other aircraft parts and auxiliary equipment manufacturing	33643	4,926	2,803	2,123 i
Guided missiles, space vehicles, and related parts manufacturing	33644	3,012	909	2,103
Railroad rolling stock manufacturing	33651	240	237	3 i
Ship and boat building	33660	D	244	D
Motorcycle, bicycle, and parts manufacturing	33691	282	269	13 i
Military armored vehicle, tank, and tank components manufacturing	33692	335	182	154
All other transportation equipment manufacturing	33699	D	366	D
Furniture and related products manufacturing	33700	458	447	10 i
Medical equipment and supplies manufacturing	33910	11,372	11,210	163
Miscellaneous manufacturing not listed elsewhere (games, office supplies, slot machines, etc.)	33990	2,456 i	2,294 i	162 i
Merchant wholesalers, durable goods	42300	1,584 i	1,503 i	81 i
Merchant wholesalers, nondurable goods	42400	545 i	405 i	140
Wholesale electronic markets and agents and brokers (business to business)	42500	34 i	31 i	3 i
Retail trade (except electronic shopping and electronic auctions)	44000	98	D	D
Electronic shopping and electronic auctions	45411	1,547 i	1,530 i	16 i
Transportation	48000	217 i	217 i	0
Couriers, messengers, and express delivery services	49200	D	D	0
Warehousing and storage	49300	3	3	* i
Newspaper, periodical, book, and directory publishers (except Internet)	51110	99 i	99 i	* i
Software publishers (except Internet)	51120	29,885 i	29,372 i	513
Motion picture and sound recording (except Internet)	51200	10	10	0
Broadcasting (except Internet)	51500	35	35	0
Wired telecommunications carriers	51710	623	568	55 i
Wireless telecommunications carriers (except satellite)	51720	2,019	2,008	11
Satellite telecommunications	51740	552	547	6
Other telecommunications (not listed elsewhere)	51790	416	411	6
Data processing, hosting, and related services	51800	5,898	5,847	51 i
Cloud computing applications and Internet-based software services	51801	5,786	5,740	46
Other information services, including Internet publishing, broadcasting, and Web search portals	51910	21,531	21,515	16
Finance: banking and credit intermediation	52200	2,710	2,675	35
Securities, commodity contracts, and other financial investments and related activities, including funds and trusts	52310	1,306	1,303	3 i
Insurance carriers and related activities	52400	1,365	1,365	0
Real estate	53100	280	280	0
Rental and leasing services	53200	70	68	2
Lessors of nonfinancial intangible assets, including patent licensing	53300	79	79	*
Legal, accounting, tax preparation, bookkeeping, and payroll services	54111	1,284	1,280	4
Architectural, engineering, and related services	54130	4,172 i	2,284 i	1,888
Specialized design services	54140	83	13	71
Computer systems design and related services	54150	13,647	11,510	2,137
Management, scientific, and technical consulting services	54160	1,760	1,410	349
Research and development services in social sciences and humanities	54172	755	12 i	744
Research and development services in biotechnology	54173	5,287 i	1,684	3,603 i
Research and development services in physical, engineering, and life sciences (except biotechnology)	54174	10,888	2,528	8,359

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Advertising and related services	54180	425	422	3
Professional, scientific, and technical services (not listed elsewhere)	54190	1,144	818	326
Management of companies and enterprises	55100	D	D	D
Administrative and support services	56100	200 i	178 i	22
Waste management and remediation services	56200	24 i	16 i	7
Offices of physicians	62110	79 i	28	51 i
Medical and diagnostic laboratories	62150	1,198	400	799
Other ambulatory health care services (ambulance, dental, home health care)	62199	42 i	37 i	5 i
Hospitals and nursing care facilities	62200	7	4	4
Social assistance services	62400	2	2	0
Arts, entertainment, and recreation	71000	51	51	0
Accommodation and food services	72000	79	D	D
Other services (not listed elsewhere)	81000	760	540	220
Undistributed	-	0	0	0

* = 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 = 2012 North American Industry Classification System.

^a Data are tabulated independently 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.