

TABLE 8-1

Domestic R&D costs, by selected industry and type of cost, for companies with 1–9 employees: 2018

(Thousands of U.S. dollars)

| Industry | NAICS code | Total | Salaries, wages, and fringe benefits | Expensed machinery and equipment | Materials and supplies | Payments to others for R&D | Depreciation on R&D property and equipment | All other costs |
|--|---------------------------------|-----------|--------------------------------------|----------------------------------|------------------------|----------------------------|--|-----------------|
| All selected industries | 31–33, 42, 51, 5413, 5415, 5417 | 5,766,729 | 2,818,156 | 163,888 | 425,260 | 1,239,892 | 60,036 | 1,059,498 |
| Manufacturing industries | 31–33 | 655,018 | 325,923 | 47,471 | 74,693 | 99,342 | 8,733 | 98,855 |
| Food, beverage, and tobacco products | 311–12 | D | D | 0 | D | D | 0 | D |
| Textile, apparel, and leather products | 313–16 | 1,025 | 770 | D | D | D | 0 | 0 |
| Wood products | 321 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Paper | 322 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Printing and related support activities | 323 | D | D | D | D | D | 0 | D |
| Petroleum and coal products | 324 | D | D | D | D | D | 0 | D |
| Chemicals | 325 | 125,099 | 46,701 | 11,377 | 11,951 | 38,827 | 962 | 15,280 |
| Pharmaceuticals and medicines | 3254 | 92,531 | 29,778 | 3,233 | 9,798 | 37,950 | 709 | 11,063 |
| Chemicals, excluding pharmaceuticals | other 325 | 32,568 | 16,923 | 8,144 | 2,153 | 877 | 254 | 4,217 |
| Plastics and rubber products | 326 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nonmetallic mineral products | 327 | 5,500 | 3,170 | 436 | 683 | 341 | D | 445 |
| Primary metals | 331 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fabricated metal products | 332 | 2,929 | D | D | D | D | D | D |
| Machinery | 333 | 49,419 | 25,497 | 2,247 | 11,493 | 6,987 | D | 2,748 |
| Computer and electronic products | 334 | 331,600 | 190,494 | 27,263 | 33,353 | 27,889 | 5,647 | 46,954 |
| Semiconductor and other electronic components | 3344 | 59,688 | 43,243 | 1,665 | 3,073 | 2,875 | 574 | 8,259 |
| Navigational, measuring, electromedical, and control instruments | 3345 | 223,576 | 116,839 | 24,572 | 24,959 | 22,872 | 4,598 | 29,736 |
| Other computer and electronic products | other 334 | 48,336 | 30,412 | 1,026 | 5,321 | 2,142 | 476 | 8,959 |
| Electrical equipment, appliances, and components | 335 | 30,428 | 18,784 | 1,251 | 3,645 | 2,473 | 447 | 3,828 |
| Transportation equipment | 336 | 14,405 | 7,118 | 1,384 | 2,071 | 1,426 | 335 | 2,071 |
| Aerospace products and parts | 3364 | 11,150 | 5,152 | 1,233 | 1,558 | 969 | 275 | 1,963 |
| Other transportation equipment | other 336 | D | D | D | D | D | D | D |
| Furniture and related products | 337 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Miscellaneous manufacturing | 339 | 90,544 | 30,247 | 2,397 | 10,432 | 20,624 | 434 | 26,410 |
| Selected nonmanufacturing industries | 42, 51, 5413, 5415, 5417 | 5,111,711 | 2,492,233 | 116,416 | 350,567 | 1,140,549 | 51,303 | 960,643 |
| Wholesale trade | 42 | 227,178 | 119,051 | 4,840 | 8,892 | 43,646 | D | 50,052 |
| Information | 51 | 538,573 | 431,564 | 9,725 | 10,431 | 20,483 | 1,932 | 64,438 |
| Software publishers | 5112 | 382,680 | 314,643 | 6,801 | 5,029 | 14,391 | 1,276 | 40,539 |

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|--|--------------------|-----------|--------------------------------------|----------------------------------|------------------------|----------------------------|--|-----------------|
| Information, excluding software publishers | 51, excluding 5112 | 155,893 | 116,921 | 2,923 | 5,402 | 6,092 | 655 r | 23,899 |
| Architectural, engineering, and related services | 5413 | 446,173 | 229,675 | 14,068 | 58,120 | 34,186 | 6,525 | 103,598 |
| Computer systems design and related services | 5415 | 1,122,849 | 733,908 | 31,402 | 46,745 | 85,268 | 11,068 | 214,458 |
| Scientific research and development services | 5417 | 2,776,938 | 978,035 | 56,382 | 226,379 | 956,966 | 31,081 | 528,095 |
| Research and development in nanotechnology | 541713 | 331,590 | 175,622 | 11,052 | 31,125 | 38,824 | 6,154 | 68,812 |
| Research and development in biotechnology (except nanobiotechnology) | 541714 | 1,307,901 | 318,847 | 11,996 | 86,881 | 651,322 | 9,217 | 229,638 |
| Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology) | 541715 | 1,102,490 | 466,911 | 32,562 | 105,618 | 260,793 | 15,139 | 221,466 |
| Social sciences and humanities research and development | 541720 | 14,839 | 8,282 | 250 r | 541 | D | D | 2,877 |

D = withheld to avoid disclosing data for individual companies; data are included in higher-level totals. r = relative standard error > 50%.

NAICS = 2017 North American Industry Classification System.

Note(s):

Detail may not add to total because of rounding or unavailable NAICS detail for select records beyond the 4-digit industry classification. Industry classification is based on dominant establishment payroll. Statistics are representative of companies located in the United States that performed or funded R&D.

Source(s):

National Center for Science and Engineering Statistics and Census Bureau, 2019 Annual Business Survey: Data Year 2018.