

TABLE 51

## Process innovation in companies, by industry and R&amp;D activity: 2015–17

(Number and percent)

Industry	NAICS code	Companies (number)	In-house or external R&D			
			Number		Percent	
			Yes	No	Yes	No
All industries	11, 21–23, 31–33, 42–81	752,895	270,271	482,624	35.9	64.1
Manufacturing industries	31–33	75,816	42,781	33,034	56.4	43.6
Food	311	5,795	3,288	2,507	56.7	43.3
Beverage and tobacco products	312	2,570	1,742	828	67.8	32.2
Textile, apparel, and leather products	313–16	3,038	1,514	1,524	49.8	50.2
Wood products	321	3,188	1,241	1,946	38.9	61.1
Paper	322	831	445	387	53.5	46.5
Printing and related support activities	323	6,897	2,448	4,449	35.5	64.5
Petroleum and coal products	324	188	140	48	74.2	25.8
Chemicals	325	3,053	2,463	590	80.7	19.3
Pesticide, fertilizer, and other agricultural chemicals	3253	170	102	67	60.5	39.5
Pharmaceuticals and medicines	3254	654	570	85	87.1	12.9
Soap, cleaning compound, and toilet preparation	3256	592	461	131	77.9	22.1
Other chemicals	other 325	1,637	1,330	307	81.2	18.8
Plastics and rubber products	326	3,275	2,156	1,118	65.9	34.1
Nonmetallic mineral products	327	2,393	1,158	1,235	48.4	51.6
Primary metals	331	970	597	373	61.5	38.5
Fabricated metal products	332	16,472	8,696	7,776	52.8	47.2
Machinery	333	7,049	5,031	2,018	71.4	28.6
Computer and electronic products	334	3,723	2,970	752	79.8	20.2
Communications equipment	3342	339	287	52	84.7	15.3
Semiconductor and other electronic components	3344	1,365	959	406	70.3	29.7
Navigational, measuring, electromedical, and control instruments	3345	1,495	1,323	172	88.5	11.5
Other computer and electronic products	other 334	524	401	123	76.6	23.4
Electrical equipment, appliances, and components	335	1,586	1,210	377	76.3	23.7
Transportation equipment	336	2,917	1,999	919	68.5	31.5
Automobiles, bodies, trailers, and parts	3361–63	1,933	1,365	568	70.6	29.4
Aerospace products and parts	3364	424	253	171	59.6	40.4
Other transportation	other 336	560	381	179	68.0	32.0
Furniture and related products	337	3,920	1,687	2,234	43.0	57.0
Miscellaneous	339	7,933	3,980	3,953	50.2	49.8
Medical equipment and supplies	3391	2,937	1,312	1,625	44.7	55.3
Other miscellaneous manufacturing	3399	4,995	2,668	2,327	53.4	46.6
Nonmanufacturing industries	11, 21–23, 42–81	677,080	227,490	449,590	33.6	66.4
Agriculture, forestry, fishing, and hunting	11	2,816	872	1,944	31.0	69.0
Mining, extraction, and support activities	21	1,791	670	1,121	37.4	62.6
Utilities	22	455	120	336	26.3	73.7
Construction	23	75,436	19,793	55,643	26.2	73.8
Wholesale trade	42	59,093	23,686	35,406	40.1	59.9
Retail trade	44–45	81,259	23,371	57,888	28.8	71.2
Transportation and warehousing	48–49	38,696	6,445	32,251	16.7	83.3
Information	51	14,796	9,393	5,403	63.5	36.5
Publishing	511	4,920	3,356	1,564	68.2	31.8
Newspaper, periodical, book, and directory publishers	5111	2,195	807	1,388	36.8	63.2
Software publishers	5112	2,725	2,549	176	93.5	6.5
Telecommunications	517	1,695	795	899	46.9	53.1
Data processing, hosting, and related services	518	3,050	2,235	815	73.3	26.7
Other information	other 51	5,132	3,006	2,126	58.6	41.4

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			Number		Percent	
			Yes	No	Yes	No
Finance and insurance	52	31,209	9,912	21,297	31.8	68.2
Real estate and rental and leasing	53	26,507	7,840	18,666	29.6	70.4
Lessors of nonfinancial intangible assets (except copyrighted works)	533	266	159	106	59.9	40.1
Other real estate and rental and leasing	other 53	26,241	7,681	18,560	29.3	70.7
Professional, scientific, and technical services	54	127,072	58,053	69,019	45.7	54.3
Legal services	5411	16,221	4,293	11,928	26.5	73.5
Accounting, tax preparation, bookkeeping, and payroll services	5412	19,545	3,688	15,857	18.9	81.1
Architectural, engineering, and related services	5413	16,486	9,776	6,710	59.3	40.7
Specialized design services	5414	4,747	2,213	2,534	46.6	53.4
Computer systems design and related services	5415	31,432	19,875	11,557	63.2	36.8
Management, scientific, and technical consulting services	5416	23,328	10,860	12,469	46.6	53.4
Scientific research and development services	5417	2,319	2,071	248	89.3	10.7
Advertising, public relations, and related services	5418	4,944	2,146	2,798	43.4	56.6
Other professional, scientific, and technical services	5419	8,049	3,130	4,919	38.9	61.1
Management of companies and enterprises	55	205	84	122	40.8	59.2
Administrative and support and waste management and remediation services	56	42,861	12,236	30,625	28.5	71.5
Educational services	61	9,300	4,444	4,857	47.8	52.2
Health care and social assistance	62	65,473	20,092	45,381	30.7	69.3
Health care services	621–23	58,380	17,670	40,710	30.3	69.7
Social assistance	624	7,093	2,422	4,671	34.2	65.8
Arts, entertainment, and recreation	71	9,045	3,617	5,428	40.0	60.0
Accommodation and food services	72	50,080	15,464	34,615	30.9	69.1
Other services	81	40,986	11,397	29,589	27.8	72.2

r = relative standard error &gt; 50%.

NAICS = 2017 North American Industry Classification System.

**Note(s):**

Detail may not add to total because of rounding. Industry classification is based on the dominant establishment payroll. R&D activity is based on unedited company responses to innovation questions, not R&D expenditures. Statistics are representative of companies located in the United States.

**Source(s):**

National Center for Science and Engineering Statistics and U.S. Census Bureau, Annual Business Survey, 2017.