

Table SRD-4

Funds spent for business R&D performed in the United States, by type of R&D and select industry: 2010–19

(Millions of dollars and percent)

Industry and NAICS code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Millions of dollars										
All business R&D										
All industries, 21–33, 42–81	278,977	294,093	302,250	322,528	340,728	355,821	374,685	400,100	441,036	492,956
Manufacturing industries, 31–33	196,711	201,361	208,415	221,476	232,815	236,132	250,553	257,227	274,075	285,674
Chemicals, 325	58,038	55,324	57,225	61,664	66,301	68,196	73,575	74,977	84,137	97,063
Computer and electronic products, 334	59,875	62,704	65,068	67,205	73,891	72,110	77,385	78,575	83,697	86,729
Transportation equipment, 336	42,913	40,880	42,305	45,972	46,746	49,274	51,275	53,292	52,629	45,375
Nonmanufacturing industries, 21–23, 42–81	82,265	92,731	93,835	101,052	107,913	119,690	124,132	142,874	166,961	207,283
Information, 51	36,852	41,865	46,805	57,207	63,773	65,513	70,748	80,252	94,349	110,227
Professional, scientific, and technical services, 54	33,690	38,219	34,309	31,017	30,975	38,626	37,595	36,922	44,860	53,233
Basic research										
All industries, 21–33, 42–81	16,371	13,020	13,293	19,508	21,936	21,792	24,644	24,829	28,980	32,239
Manufacturing industries, 31–33	10,667	8,738	9,119	15,186	17,822	16,756	18,882	18,624	20,873	22,701
Chemicals, 325	4,670	4,243	3,964	7,308	9,037	8,317	10,117	10,193	11,972	13,869
Computer and electronic products, 334	2,808	1,438	1,556	2,684	2,792	2,338	2,468	2,543	2,445	2,175
Transportation equipment, 336	1,097	955	952	1,823	2,911	3,605	3,112	2,824	3,062	3,486
Nonmanufacturing industries, 21–23, 42–81	5,704	4,282	4,174	4,321	4,114	5,036	5,762	6,205	8,108	9,538
Information, 51	2,101	1,518	1,868	2,178	2,105	1,627	2,028	2,243	3,250	3,816
Professional, scientific, and technical services, 54	2,663	2,030	1,966	1,630	1,572	2,240	2,671	2,491	3,482	4,161
Applied research										
All industries, 21–33, 42–81	44,906	47,186	50,755	51,014	53,415	56,472	61,020	62,132	65,222	74,031
Manufacturing industries, 31–33	33,224	32,576	35,514	35,166	36,585	39,583	42,443	43,698	44,027	45,769
Chemicals, 325	15,006	15,121	16,640	13,894	13,837	16,047	15,771	17,021	18,531	19,120
Computer and electronic products, 334	8,426	7,069	7,120	8,485	8,740	8,973	10,298	11,194	9,947	11,587
Transportation equipment, 336	3,597	3,563	4,295	6,022	7,141	7,165	7,859	7,490	7,440	7,332
Nonmanufacturing industries, 21–23, 42–81	11,682	14,610	15,241	15,848	16,830	16,889	18,576	18,434	21,195	28,262
Information, 51	2,764	3,864	4,033	5,687	6,137	6,511	6,805	7,626	8,979	8,690
Professional, scientific, and technical services, 54	7,162	8,615	8,825	8,181	8,777	8,264	9,900	8,584	9,384	11,731
Experimental development										
All industries, 21–33, 42–81	217,699	233,887	238,202	252,007	265,377	277,558	289,021	313,139	346,834	386,686
Manufacturing industries, 31–33	152,821	160,047	163,781	171,124	178,408	179,793	189,228	194,904	209,175	217,203
Chemicals, 325	38,362	35,961	36,621	40,462	43,427	43,833	47,687	47,763	53,635	64,075
Computer and electronic products, 334	48,640	54,197	56,392	56,036	62,358	60,799	64,619	64,837	71,305	72,967
Transportation equipment, 336	38,219	36,361	37,058	38,126	36,693	38,504	40,305	42,978	42,128	34,557
Nonmanufacturing industries, 21–23, 42–81	64,878	73,839	74,421	80,883	86,970	97,765	99,794	118,235	137,658	169,483
Information, 51	31,987	36,483	40,903	49,341	55,530	57,374	61,916	70,383	82,120	97,721

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Industry and NAICS code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Professional, scientific, and technical services, 54	23,866	27,573	23,517	21,206	20,626	28,122	25,024	25,848	31,994	37,341
Industry share of each type of R&D (%)										
All business R&D										
All industries, 21–33, 42–81	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Manufacturing industries, 31–33	70.5	68.5	69.0	68.7	68.3	66.4	66.9	64.3	62.1	58.0
Chemicals, 325	20.8	18.8	18.9	19.1	19.5	19.2	19.6	18.7	19.1	19.7
Computer and electronic products, 334	21.5	21.3	21.5	20.8	21.7	20.3	20.7	19.6	19.0	17.6
Transportation equipment, 336	15.4	13.9	14.0	14.3	13.7	13.8	13.7	13.3	11.9	9.2
Nonmanufacturing industries, 21–23, 42–81	29.5	31.5	31.0	31.3	31.7	33.6	33.1	35.7	37.9	42.0
Information, 51	13.2	14.2	15.5	17.7	18.7	18.4	18.9	20.1	21.4	22.4
Professional, scientific, and technical services, 54	12.1	13.0	11.4	9.6	9.1	10.9	10.0	9.2	10.2	10.8
Basic research										
All industries, 21–33, 42–81	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Manufacturing industries, 31–33	65.2	67.1	68.6	77.8	81.2	76.9	76.6	75.0	72.0	70.4
Chemicals, 325	28.5	32.6	29.8	37.5	41.2	38.2	41.1	41.1	41.3	43.0
Computer and electronic products, 334	17.2	11.0	11.7	13.8	12.7	10.7	10.0	10.2	8.4	6.7
Transportation equipment, 336	6.7	7.3	7.2	9.3	13.3	16.5	12.6	11.4	10.6	10.8
Nonmanufacturing industries, 21–23, 42–81	34.8	32.9	31.4	22.1	18.8	23.1	23.4	25.0	28.0	29.6
Information, 51	12.8	11.7	14.1	11.2	9.6	7.5	8.2	9.0	11.2	11.8
Professional, scientific, and technical services, 54	16.3	15.6	14.8	8.4	7.2	10.3	10.8	10.0	12.0	12.9
Applied research										
All industries, 21–33, 42–81	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Manufacturing industries, 31–33	74.0	69.0	70.0	68.9	68.5	70.1	69.6	70.3	67.5	61.8
Chemicals, 325	33.4	32.0	32.8	27.2	25.9	28.4	25.8	27.4	28.4	25.8
Computer and electronic products, 334	18.8	15.0	14.0	16.6	16.4	15.9	16.9	18.0	15.3	15.7
Transportation equipment, 336	8.0	7.6	8.5	11.8	13.4	12.7	12.9	12.1	11.4	9.9
Nonmanufacturing industries, 21–23, 42–81	26.0	31.0	30.0	31.1	31.5	29.9	30.4	29.7	32.5	38.2
Information, 51	6.2	8.2	7.9	11.1	11.5	11.5	11.2	12.3	13.8	11.7
Professional, scientific, and technical services, 54	15.9	18.3	17.4	16.0	16.4	14.6	16.2	13.8	14.4	15.8
Experimental development										
All industries, 21–33, 42–81	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Manufacturing industries, 31–33	70.2	68.4	68.8	67.9	67.2	64.8	65.5	62.2	60.3	56.2
Chemicals, 325	17.6	15.4	15.4	16.1	16.4	15.8	16.5	15.3	15.5	16.6
Computer and electronic products, 334	22.3	23.2	23.7	22.2	23.5	21.9	22.4	20.7	20.6	18.9
Transportation equipment, 336	17.6	15.5	15.6	15.1	13.8	13.9	13.9	13.7	12.1	8.9
Nonmanufacturing industries, 21–23, 42–81	29.8	31.6	31.2	32.1	32.8	35.2	34.5	37.8	39.7	43.8

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(Millions of dollars and percent)

Industry and NAICS code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Information, 51	14.7	15.6	17.2	19.6	20.9	20.7	21.4	22.5	23.7	25.3
Professional, scientific, and technical services, 54	11.0	11.8	9.9	8.4	7.8	10.1	8.7	8.3	9.2	9.7

i = more than 50% of the estimate is a combination of imputation and reweighting to account for nonresponse.

NAICS = North American Industry Classification System.

Note(s):

Detail may not add to total because of rounding. Industry classification is based on the dominant business code for domestic R&D performance, where available. For companies that did not report business codes, the classification used for sampling was assigned. Beginning in survey year 2018, statistics are representative of companies located in the United States that performed or funded \$50,000 or more of R&D. For survey years 2010–13, industry classification was based on the 2007 NAICS, whereas for survey years 2014–18, industry classification was based on the 2012 NAICS. The 2010–16 data come from the Business R&D and Innovation Survey and do not include companies with fewer than 5 domestic employees. Data for 2017–18 come from the Business Research and Development Survey and do not include companies with fewer than 10 domestic employees. Data for 2019 come from the Business Enterprise Research and Development Survey and do not include companies with fewer than 10 domestic employees.

Source(s):

National Center for Science and Engineering Statistics and U.S. Census Bureau, Business R&D and Innovation Survey (BRDIS), Business Research and Development Survey (BRDS), and Business Enterprise Research and Development Survey (BERD).

Science and Engineering Indicators