

TABLE 43

Domestic R&D performance by source of funds and performer, by industry and company size: 2020

(Millions of U.S. dollars)

Industry and company size	NAICS code	Paid for by the company			Paid for by others				
		Total	R&D performed by others (purchased and collaborative R&D)	R&D performed by the company	Total	R&D performed by others (subcontracted/ passed-through R&D costs)	R&D performed by the company		
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All industries	21-23, 31-33, 42-81	504,793	38,631	466,162	80,901	9,444	71,457	28,905	42,552
Manufacturing industries	31-33	299,199	34,602	264,596	51,077	7,228	43,848	21,710	22,139
Food	311	5,241	255	4,985	255	1	254	0	254
Beverage and tobacco products	312	1,225	170	1,056	125	4	121	0	121
Textile, apparel, and leather products	313-16	823	10	812	9	*	9	5	4
Wood products	321	193	10	183	3	0	3	*	3
Paper	322	934	7	927	0-2	0-1	1	0	1
Printing and related support activities	323	286	4	282	1	0	1	0	1
Petroleum and coal products	324	1,416	195	1,222	102	0-12	89-103	0	89-103
Chemicals	325	114,951	25,548	89,403	15,888	4,213	11,675	1,101	10,574
Basic chemicals	3251	2,588	65	2,523	172	1	171	5	166
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	1,188	i 27	1,161	101	28	73	4	68
Pesticide, fertilizer, and other agricultural chemicals	3253	842-860	68-85	775	288-304	0-13	284-291	0	284-291
Pharmaceuticals and medicines	3254	105,944	25,086	80,858	15,083	4,165	10,918	1,066	9,852
Soap, cleaning compound, and toilet preparation	3256	2,729	253	2,476	196	7	189	0	189
Paint, coating, adhesive, and other chemicals	3255, 3259	1,644-1,659	33-49	1,610	32-47	0-13	32-39	25	8-14
Plastics and rubber products	326	2,628	21	2,607	28	2	26	*	26
Nonmetallic mineral products	327	1,711	92	i 1,619	i 99	1	98	2	96
Primary metals	331	815	20	795	21	1	20	0-2	18-21
Fabricated metal products	332	3,422	86	3,336	63	3	60	12	49
Machinery	333	15,451	379	15,071	1,213	61	1,152	98	1,054
Agricultural implement	33311	1,936	177	1,760	10-61	0-10	10-52	*	9-52
Semiconductor machinery	333242	4,127	6	4,121	729	43	686	*	685
Engine, turbine, and power transmission equipment	3336	1,535	12	1,523	131	9	122	87	35
Other machinery	other 333	7,852	185	i 7,667	292-343	0-10	292-334	9	282-325
Computer and electronic products	334	91,680	3,175	88,505	11,589	559	i 11,030	6,434	i 4,596

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Communications equipment	3342	12,142	1,035	11,107	1,042	46	996	366 - 531	465 - 630		
Semiconductor and other electronic components	3344	41,022	221	40,801	2,463	83	2,380	68	2,312		
Navigational, measuring, electromedical, and control instruments	3345	11,301	290	11,012	7,913	420	7,493	5,837	1,656		
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	2,708	101	2,606	256	4	251	12	240		
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	3,591 - 3,751	30 - 189	3,561	7,440	415	7,025	5,788	1,237		
Other measuring and controlling device	other 3345	4,843 - 5,002	0 - 158	4,844	218	1	217	38	179		
Other computer and electronic products	other 334	27,215	1,629	25,585	171	9	161	0 - 162	0 - 162		
Electrical equipment, appliances, and components	335	4,589	96	4,492	506	1	506	29	477		
Transportation equipment	336	33,805	3,573	30,232	20,930	2,366	18,564	13,961	4,603		
Motor vehicles, bodies, trailers, and parts	3361-63	22,634	3,112	19,522	3,765 - 3,778	166 - 178	3,599	68	3,531		
Aerospace products and parts	3364	9,499	388	9,111	15,992	2,189	13,803	12,797	1,007		
Aircraft, aircraft engine, and aircraft parts	336411-13	8,540	260	8,281	15,195	2,185	13,011	12,051	960		
Guided missile, space vehicle, and related parts	336414-15, 336419	959	129	831	797	4	793	746	47		
Military armored vehicle, tank, and tank component	336992	4	*	4	6	0	6	0 - 7	0 - 7		
Other transportation	other 336	1,667	73	1,594	1,155 - 1,165	0 - 10	1,155	1,088 - 1,098	57 - 67		
Furniture and related products	337	513	20	492	4	*	3	*	3		
Miscellaneous	339	19,517	941	18,576	235 - 243	9 - 22	215 - 233	65 - 72	147 - 168		
Medical equipment and supplies	3391	16,815	871	15,944	183	10	173	36	137		
Other miscellaneous manufacturing	3399	2,702	70	2,632	53 - 60	0 - 12	42 - 60	29 - 36	9 - 31		
Nonmanufacturing industries	21-23, 42-81	205,595	4,029	201,566	29,824	2,215	27,608	7,195	20,414		
Mining, quarrying, oil and gas extraction, and support activities	21	1,199	79	1,121	45	0	45	3	42		
Utilities	22	414	190	224	48	8	40	35	5		
Wholesale trade	42	1,155	154	1,001	106	49	58	0	58		

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Electronic shopping and electronic auctions	454111-12	3,837 - 19,445	0 - 106	3,837 - 19,343	2 - 50	0	2 - 50	0	2 - 50	
Transportation and warehousing	48-49	5,156	203	4,954	3	0	3	0	3	
Information	51	130,486	2,136	128,350	1,224	111	1,113	364	749	
Publishing	511	35,762	1,246	34,516	562	52	509	65	444	
Newspaper, periodical, book, and directory publishers	5111	64	4	60	0	0	0	0	0	
Software publishers	5112	35,698	1,242	34,456	562	52	509	65	444	
Telecommunications	517	3,825	453	3,371	54 - 68	0 - 3	54 - 66	2 - 14	40 - 63	
Data processing, hosting, and related services	518	41,390	285	41,105	503	57	446	287	159	
Other information	other 51	49,510	153	49,358	91 - 107	0 - 3	91 - 105	0 - 11	81 - 105	
Finance and insurance	52	12,494	290	12,204	93	1	92	45	47	
Real estate and rental and leasing	53	3,249	*	3,249	*	0	*	0	*	
Lessors of nonfinancial intangible assets (except copyrighted works)	533	7	0	7	*	0	*	0	*	
Other real estate and rental and leasing	other 53	3,242	*	3,242	0	0	0	0	0	
Professional, scientific, and technical services	54	29,166	844	28,322	28,067	2,022	26,045	6,733	19,313	
Architectural, engineering, and related services	5413	2,278	65	2,214	2,451	450	2,001	1,466	534	
Computer systems design and related services	5415	14,531	239	14,293	3,662	19	3,643	662	2,980	
Scientific research and development services	5417	6,739	493	6,246	20,822	1,468	19,354	3,914	15,439	
Research and development in nanotechnology	541713	125 - 129	0 - 3	126	58	5	53	38	15	
Research and development in biotechnology (except nanobiotechnology)	541714	1,358	182	1,176	5,112	98	5,014	117	4,898	
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	5,213 - 5,219	307 - 312	4,906	13,643 - 14,999	11 - 1,367	13,632	3,157	10,476	
Research and development in the social sciences and humanities	541720	38	0	38	653 - 2,008	0 - 1,354	654	603	51	
Other professional, scientific, and technical services	other 54	5,617	47	5,570	1,132	84	1,048	690	359	
Health care services	621-23	1,405 - 1,408	31 - 34	1,374	102 - 105	0 - 2	103	13	90	

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Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	1,429 - 17,036	0 - 106	1,429 - 16,934	83 - 136	21 - 27	62 - 109	2	59 - 107	
All companies (number of domestic employees)	–	504,793	38,631	466,162	80,901	9,444	71,457	28,905	42,552	
Small companies										
10–19 ^a	–	4,579	560	4,019	1,159	131	1,029	445	584	
20–49	–	12,703	1,733	10,970	2,366	342	2,025	856	1,169	
Medium companies										
50–99	–	12,667	1,490	11,177	2,198	382	1,816	604	1,212	
100–249	–	25,069	2,938	22,132	3,838	558	3,280	1,499	1,781	
Large companies										
250–499	–	19,693	1,626	18,067	3,111	300	2,811	1,070	1,741	
500–999	–	20,622	2,164	18,458	3,253	446	2,807	467	2,340	
1,000–4,999	–	80,110	4,193	75,917	13,964	1,643	12,322	2,744	9,577	
5,000–9,999	–	48,050	5,599	42,451	6,547	602	5,945	814	5,131	
10,000–24,999	–	81,357	8,530	72,827	17,784	2,044	15,739	1,330	14,409	
25,000 or more	–	199,943	9,798	190,145	26,680	2,996	23,684	19,075	4,609	

* = amount < \$500,000; i = more than 50% of the estimate is a combination of imputation and reweighting to account for nonresponse.

NAICS = 2017 North American Industry Classification System.

^a The Business Enterprise Research and Development Survey does not include companies with fewer than 10 domestic employees.**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. Statistics are representative of companies located in the United States that performed or funded \$50,000 or more of R&D and are not comparable with estimates published for years prior to 2018. An estimate range may be displayed in place of a single estimate to avoid disclosing operations of individual companies.

Source(s):

National Center for Science and Engineering Statistics and Census Bureau, Business Enterprise Research and Development Survey, 2020.