

TABLE 34

Domestic R&D paid for by others and performed by the company, by industry and company size: 2021

(Millions of U.S. dollars)

Industry	NAICS code	Company size (domestic employees)											
		All companies	10-19 ^a	20-49	50-99	100-249	250-499	500-599	1,000-4,999	5,000-9,999	10,000-24,999	25,000 or more	
All industries	21-23, 31-33, 42-81	74,695	1,219	2,434	2,052	3,993	3,358	3,777	11,006	8,944	i	20,549	17,361
Manufacturing industries	31-33	38,394	400	889	702	1,347	1,547	1,607	9,257	2,196		7,942	12,508
Food	311	297 - 302	0	0 - 72	6	5 - 71	1	10	42 - 107	0 - 46		36 - 188	3
Beverage and tobacco products	312	19	0	* r	0	*	0	0	18	0		0	0
Textile, apparel, and leather products	313-16	11	0	5	1	r	5	0	*	0		0	0
Wood products	321	2 - 10	0	0	0	0	0	2 - 10	0	0		0	0
Paper	322	0	0	0	0	0	0	0	0	0		0	0
Printing and related support activities	323	0 - 7	0	0 - 7	0	*	0	0	0	0		0	0
Petroleum and coal products	324	5	0	0	0	0	0	*	0	0 - 5		0 - 5	1
Chemicals	325	12,393	65	471	245	446	766	484	5,117	356		4,051	391
Basic chemicals	3251	154	0 - 6	1	1	13	4	9	97 - 108	20		2	0
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	69 - 98	i	0 - 7	4	3	r	11	9	0	32 - 71	i	0
Pesticide, fertilizer, and other agricultural chemicals	3253	211 - 241	i	0	* i	0	*	i	0	0	210 - 241	i	0
Pharmaceuticals and medicines	3254	11,697	59	465	238	400	749	475	4,735	337		3,849	390
Soap, cleaning compound, and toilet preparations	3256	209	0	0	0	20	*	0	0	0		190	0
Paint, coating, adhesive, and other chemicals	3255, 3259	19 - 28	0 - 7	1	3	3	4	0	0 - 9	0		11	0
Plastics and rubber products	326	183	0 - 26	0 - 72	7	4	7	30	5	*		31 - 133	0
Nonmetallic mineral products	327	31	0	1	*	6	1	10	13	0		0	0
Primary metals	331	22 - 26	i	0	0 - 5	5	r	1	2	0	15	i	0 - 5
Fabricated metal products	332	412	196 - 248	19	3	20	19	4	i	102	0 - 46	0	0
Machinery	333	1,003	15	111	r	66	115	13	19	136	463	61	3
Agricultural implement	33311	60 - 68	0	0	0	0 - 63	0	0	0	0 - 68	0		*
Semiconductor machinery	333242	167	0	21	24	20	i	0	11	91	0	0	0
Engine, turbine, and power transmission equipment	3336	128 - 134	0 - 6	2	9	*	i	6	0	0	71	38	0
Other machinery	other 333	641	9 - 16	88	r	32	31 - 96	7	8	45	324 - 393	23	2
Computer and electronic products	334	6,852	40 - 88	111	196	291	649	624	848	835	i	0 - 40	3,214
Communications equipment	3342	1,218	i	0 - 72	0 - 27	0 - 74	0 - 144	0 - 158	0	49	0 - 827	i	0
Semiconductor and other electronic components	3344	1,880	0 - 72	27	66	144	492	448	681	0 - 169	i	1	0

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Navigational, measuring, electromedical, and control instruments	3345	3,630	16 - 32	58 - 85	57 - 131	148	0 - 158	175	33	9 - 836	0	2,044 - 3,136				
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	250	3	38	58	44	0	99	0	9	0	0				
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	3,193	0 - 15	21	0 - 74	7 - 105	0 - 103	*	29	0 - 827	0	2,044 - 3,136				
Other measuring and controlling devices	other 3345	187	14	0 - 27	0 - 74	0 - 96	0 - 96	76	3	0 - 96	0	0				
Other computer and electronic products	other 334	123	0	0 - 27	0	0	0 - 39	1	85	0	0 - 39	0				
Electrical equipment, appliances, and components	335	486	* r	19	4	42	8	21	129	0	263	0				
Transportation equipment	336	16,356	11	53	140	282	i	68	375	2,756	441	3,341	8,888	i		
Motor vehicles, bodies, trailers, and parts	3361-63	3,637	7	19	r	65	49	44	300	1,821	168	1,154	9			
Aerospace products and parts	3364	11,568	i	4	32	74	233	i	23	73	i	883	264	2,187	7,793	i
Aircraft, aircraft engine, and aircraft parts	336411-13	10,552	i	0 - 5	24	69	0 - 234	21	0 - 74	i	0 - 352	264	1,951 - 2,188	7,793	i	
Guided missile, space vehicle, and related parts	336414-15, 336419	1,016	0 - 5	8	5	234	i	3	0 - 74	531 - 884	0	0 - 235	0			
Military armored vehicle, tank, and tank components	336992	1	0	0	1	0	0	1	0	0	0	0	0			
Other transportation	other 336	1,149	0	2	0	*	0	2	51	8	0	1,086				
Furniture and related products	337	3	0	2	1	*	*	0	*	r	0	0	0			
Miscellaneous	339	311	12	29 - 85	28	68 - 124	i	13	15 - 32	16 - 72	57	9	8			
Medical equipment and supplies	3391	233	12	30	24	r	69	i	1	7	17	57	9	8		
Other miscellaneous manufacturing	3399	78	* r	0 - 54	5	r	0 - 54	12	8 - 26	0 - 54	0	0	0			
Nonmanufacturing industries	21-23, 42-81	36,300	i	819	1,545	1,351	2,646	1,811	2,170	1,749	i	6,748	i	12,608	i	4,853
Mining, quarrying, oil and gas extraction, and support activities	21	183	i	0	*	13	i	26	i	0	0	124	i	0	19	0
Utilities	22	35	i	0	4	0	0	0	0	2	*	*	28	i		
Wholesale trade	42	84	27	r	24	i	2	32	i	0	0	0	0	0		
Electronic shopping and electronic auctions	454111-12	4 - 8	2 - 5	0	2	r	0	0	0	0	0	0	0			
Transportation and warehousing	48-49	8 - 10	0	8	0	0	*	0 - 2	0	0	0	0	0			
Information	51	1,366	50	113	120	272	r	237	44	2	9	i	262	257		
Publishing	511	631	3	r	22 - 65	0 - 42	224	r	65	19	0	0	0	257		
Newspaper, periodical, book, and directory publishers	5111	23	r	0	23	r	0	0	0	0	0	0	0	0		
Software publishers	5112	608	3	r	0 - 42	0 - 42	224	r	65	19	0	0	0	257		
Telecommunications	517	30 - 98	*	23 - 91	0	6	0	0	0	0	0	0	0			
Data processing, hosting, and related services	518	607	46	0 - 62	0 - 62	42	172	24	2	0	262	0				

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Other information	other 51	29 - 99	* r	*	19 - 90	0	0	0	0	9	i	0	0					
Finance and insurance	52	45	0	0	0	2	0	0	0	0	0	0	43					
Real estate and rental and leasing	53	0 - 1	0 - 1	0	0	*	0	0	0	0	0	0	0					
Lessors of nonfinancial intangible assets (except copyrighted works)	533	0	0	0	0	0	0	0	0	0	0	0	0					
Other real estate and rental and leasing	other 53	0 - 1	0 - 1	0	0	*	0	0	0	0	0	0	0					
Professional, scientific, and technical services	54	34,413	i	739	1,355	1,200	2,303	1,537	2,109	1,594	i	6,726	i	12,325	i	4,524		
Architectural, engineering, and related services	5413	2,007		104	346	253	286	184	78	168		0		587		0		
Computer systems design and related services	5415	3,221		112	139	250	r	137	91	56		86		1,970		298		
Scientific research and development services	5417	28,019	i	464	787	554	1,666	1,186	1,814	1,335	i	6,640	i	9,768	i	3,805		
Research and development in nanotechnology	541713	73	i	25	22	27	i	0	0	0		0		0		0		
Research and development in biotechnology (except nanobiotechnology)	541714	7,374		102	119	85		542	49	203		0		2,469		3,805		
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	20,046	i	334	637	442	1,069	1,132	1,611	1,335	i	6,188	i	7,298	i	0		
Research and development in the social sciences and humanities	541720	525		3	9	0	56	6	0	0		452		0		0		
Other professional, scientific, and technical services	other 54	1,166		60	84	143	213	76	161	9		0		0		421		
Health care services	621-23	95		*	38	r	12	11	22	7		5		0		*		
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	62 - 66		0 - 3	3	r	2	r	0	15		6 - 12		20		14		0

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

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, 2021.