

TABLE 2

Worldwide, domestic, and foreign R&D paid for by the company and others and performed by the company, by industry and company size: 2018

(Millions of U.S. dollars)

Industry and company size	NAICS code	Worldwide R&D performance			Domestic R&D performance			Foreign R&D performance		
		Total	Paid for by company	Paid for by others	Total	Paid for by company	Paid for by others	Total	Paid for by company	Paid for by others
All industries	21-23, 31-33, 42-81	541,412	468,235	73,178	441,036	377,806	63,230	100,376	90,429	9,947
Manufacturing industries	31-33	338,953	298,082	40,871	274,075	234,682	39,393	64,878	63,400	1,478
Food	311	5,518	5,273	245	4,654	4,412	242	864	862	3
Beverage and tobacco products	312	1,629	1,520	109	1,113	1,004	109	516	516	0
Textile, apparel, and leather products	313-16	1,205	1,202	4	989	986	4	216	216	* i
Wood products	321	206	202	4	203	199	4	3	3	0
Paper	322	1,014	1,012	2	934	932	2	80	80	* i
Printing and related support activities	323	246	242	4	242	238	4	4	4	0
Petroleum and coal products	324	1,460 - 1,463	1,438	22 - 25	1,269	1,246	23	192 - 194	192	0 - 2 i
Chemicals	325	100,886	90,043	10,842	84,137	73,584	10,553	16,749	16,459	289
Basic chemicals	3251	3,046	2,853	194	2,443	2,251	192	603	601	2
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	2,427 - 2,445	2,343	84 - 102	1,653	1,568	85	774 - 792	775	0 - 16
Pesticide, fertilizer, and other agricultural chemicals	3253	1,788 - 1,797	1,457 i	332 - 340	1,460	1,135 i	326	328 - 337 i	322 i	6 - 14
Pharmaceuticals and medicines	3254	88,537	78,480	10,057	74,592	64,800	9,792	13,945	13,679	265
Soap, cleaning compound, and toilet preparation	3256	3,557	3,420	137	2,710	2,573	137	847	847	0
Paint, coating, adhesive, and other chemicals	3255, 3259	1,512 - 1,531	1,492	21 - 38	1,278	1,257	21	235 - 252	235	0 - 17 i
Plastics and rubber products	326	3,179	3,090	89	2,751	2,667	83	428	423	5
Nonmetallic mineral products	327	1,567 i	1,542 i	24	1,385	1,361	24	181 i	181 i	0
Primary metals	331	990	967	23 i	839	817	22 i	151	150	1
Fabricated metal products	332	2,544	2,426	118	2,327	2,222	105	216	204	12
Machinery	333	19,319	18,197	1,122	14,799	13,765	1,034	4,521	4,432	89
Agricultural implement	33311	2,730	2,717	13	1,872	1,862	10	858	855	3
Semiconductor machinery	333242	5,077	4,521	556	4,166	3,623	543	911	898	13
Engine, turbine, and power transmission equipment	3336	3,418 - 3,440	3,246	172 - 194	2,483	2,310	173	935 - 958	936	0 - 21
Other machinery	other 333	8,071 - 8,095	7,713	358 - 382	6,278	5,970	307	1,793 - 1,817	1,743	51 - 74
Computer and electronic products	334	112,020	101,666	10,353	83,697	73,922	9,775	28,322	27,744	578
Communications equipment	3342	16,483	15,191	1,292 i	13,107	11,822	1,285 i	3,376	3,369	7
Semiconductor and other electronic components	3344	45,540	42,905	2,634	31,052	28,642	2,410	14,487	14,263	224

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Navigational, measuring, electromedical, and control instruments	3345	20,898	14,707	6,192	16,727	10,864	5,863	4,172	3,843	329
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	4,378	4,212	166	3,208	3,046	163	1,169	1,166	3
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	9,997	4,246	5,751	8,843	3,388	5,455	1,154	858	296
Other measuring and controlling device	other 3345	6,524	6,249	275	4,675	4,430	245	1,849	1,819	30
Other computer and electronic products	other 334	29,099	28,863	235	22,811	22,594	217	6,287	6,269	18
Electrical equipment, appliances, and components	335	6,180	5,909	272	4,487	4,222	266	1,693	1,687	6
Transportation equipment	336	60,075	42,884	17,191	52,629	35,894	16,735	7,446	6,990	457
Motor vehicles, bodies, trailers, and parts	3361-63	32,125	29,286	2,839	25,586	23,080	2,506	6,540	6,206	334
Aerospace products and parts	3364	24,977 - 25,002	11,759	13,218 - 13,242	24,291	11,160	13,131	686 - 711	599	87 - 111
Aircraft, aircraft engine, and aircraft parts	336411-13	23,654 - 23,679	11,345	12,309 - 12,333	22,968	10,746	12,222	685 - 710	599	87 - 111
Guided missile, space vehicle, and related parts	336414-15, 336419	1,323	414	909	1,323	414	909	1	1	0
Military armored vehicle, tank, and tank component	336992	11	6	6	11	6	6	0	0	0
Other transportation	other 336	2,936 - 2,961	1,833	1,104 - 1,128	2,741	1,649	1,092	195 - 221	184	11 - 36
Furniture and related products	337	435	428	7	410	404	5	25	23	2
Miscellaneous	339	20,478 - 20,483	20,040	438 - 443	17,209	16,807	402	3,270 - 3,274	3,234	36 - 40
Medical equipment and supplies	3391	17,415	17,114	301	14,531	14,267	264	2,884	2,847	37
Other miscellaneous manufacturing	3399	3,063 - 3,068	2,926	137 - 142	2,678	2,540	138	386 - 390	386	0 - 4
Nonmanufacturing industries	21-23, 42-81	202,460	170,153	32,307	166,961	143,123	23,838	35,498	27,029	8,469
Mining, quarrying, oil and gas extraction, and support activities	21	2,068	1,936	131	1,905	1,775	130	163	161	1
Utilities	22	283	232	51	275	224	51	8	8	0
Wholesale trade	42	938	913	25	906	881	25	32	32	0
Electronic shopping and electronic auctions	454111-12	11,715 - 15,516	11,620 - 15,422	94	11,652	11,557	94	63 - 3,864	63 - 3,864	0
Transportation and warehousing	48-49	956	949	7	942	935	7	14	14	0
Information	51	111,505	110,612	893	94,349	93,487	862	17,156	17,125	31
Publishing	511	39,965	39,462	503	32,770	32,281	489	7,195	7,182	13

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50-99	-	13,013	11,103	1,910	12,321	10,446	1,875	692	657	35
100-249	-	20,420	16,324	4,096	18,547	14,626	3,921	1,872	1,698	174
Large companies										
250-499	-	21,824	18,739	3,085	19,645	16,604	3,041	2,179	2,135	44
500-999	-	20,214	17,710	2,504	17,657	15,561	2,096	2,557	2,149	408
1,000-4,999	-	83,761	73,402	10,359	68,578	58,509	10,068	15,184	14,893	291
5,000-9,999	-	60,875	46,307	14,568	45,337	36,274	9,063	15,538	10,033	5,505
10,000-24,999	-	106,777	95,269	11,508	84,420	74,423	9,997	22,356	20,846	1,511
25,000 or more	-	198,190	175,805	22,385	158,889	138,465	20,423	39,301	37,339	1,961

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

NAICS = 2012 North American Industry Classification System.

^a Business 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. 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. This change has affected the comparability of these estimates 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 U.S. Census Bureau, Business Research and Development Survey, 2018.