

TABLE 46

Worldwide, foreign, and domestic capital expenditures and capital expenditures for domestic R&D paid for and performed by the company, by type of expenditure, industry, and company size: 2021

(Millions of U.S. dollars)

Industry and company size	NAICS code	Worldwide capital expenditures			Foreign capital expenditures			Domestic capital expenditures			Domestic capital expenditures for R&D			Domestic capital expenditures for R&D (type of property)																				
		Total	Property, plant, and equipment	Identifiable intangible assets	Total	Property, plant, and equipment	Identifiable intangible assets	Total	Property, plant, and equipment	Identifiable intangible assets	Total	Property, plant, and equipment	Identifiable intangible assets	Land acquisition	Buildings and land improvement	Machinery and equipment	Capitalized software	Other intellectual property	All other															
All industries	21-23, 31-33, 42-81	981,447	852,787	128,661	188,184	170,158	18,026	793,263	682,629	110,634	52,844	39,084	13,760	584	i	5,220	19,665	16,247	i	5,711	5,417	i												
Manufacturing industries	31-33	429,329	372,727	56,603	124,622	112,126	12,497	304,707	260,601	44,106	28,450	22,755	5,695	243		3,877	15,169	2,596		3,654	2,910													
Food	311	33,986	29,957	4,029	7,625	7,033	592	26,361	22,924	3,437	946	926	20	13		138	622	35		16	124													
Beverage and tobacco products	312	13,740	i	12,281	i	1,459	i	5,269	i	5,269	i	0	8,472	i	7,012	i	1,459	i	297	i	296	i	1	r	0	25	i	253	i	1	r	0	18	i
Textile, apparel, and leather products	313-16	2,874	2,803	70	621	620	2	2,252	2,184	68	69	61	9	i	*	11	32	22		3	*	i												
Wood products	321	2,527	2,463	64	179	i	176	i	3	i	2,348	2,288	61	15	15	*	i	*	1	13	*	i	0	*										
Paper	322	6,838	6,066	772	673	617	56	6,165	5,449	716	511	511	*	i	0	2	509	*		0	*													
Printing and related support activities	323	2,338	2,109	228	93	92	1	2,245	2,017	228	39	39	*		0	*	36	1		0	2													
Petroleum and coal products	324	24,164	23,338	825	10,755	10,152	603	13,409	13,187	222	171	i	165	i	6	*	i	16	i	116	i	6	0	33	i									
Chemicals	325	86,197	77,531	8,667	22,116	20,373	1,743	64,081	57,157	6,924	8,291	6,748	1,543	16	i	1,968	3,346	535		1,190	1,236													
Basic chemicals	3251	25,426	22,957	2,469	6,952	5,958	994	18,473	16,999	1,475	317	303	14	0		37	253	3		3	21													
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	5,601	5,506	96	747	736	11	4,854	4,770	i	85	62	56	6	0	4	41	14		*	1													
Pesticide, fertilizer, and other agricultural chemicals	3253	3,466	3,210	256	267	235	32	3,199	2,974	225	170	i	71	i	99	i	2	i	15	i	40	i	85	i	7	i	21	i						
Pharmaceuticals and medicines	3254	38,368	33,803	4,565	10,355	9,827	528	28,013	23,976	4,037	7,504	6,081	1,422	14	i	1,840	2,885	406		1,179	1,180													
Soap, cleaning compound, and toilet preparations	3256	8,470	7,878	592	2,467	2,449	17	6,003	5,429	574	i	174	174	1	0	59	82	24		*	10													
Paint, coating, adhesive, and other chemicals	3255, 3259	4,867	4,177	690	1,329	1,167	161	3,538	3,009	529	64	63	1	i	0	12	i	45	3		1	3												
Plastics and rubber products	326	13,253	12,672	582	1,812	i	1,762	i	50	i	11,441	10,910	532	353	i	348	i	5	0	42	281	i	6	1	r	23								
Nonmetallic mineral products	327	5,265	5,245	i	20	i	1,285	i	1,284	i	1	3,980	3,961	19	i	193	186	7	i	0	4	i	177	*	7	i	5	i						
Primary metals	331	3,752	3,718	34	336	335	*	3,417	3,383	34	172	157	16	0	79	74	i	1		15	3	i												
Fabricated metal products	332	15,054	13,944	1,110	3,491	3,051	r	440	11,563	10,893	670	r	397	380	17	3	42	291	17		1	42												
Machinery	333	25,349	23,637	1,712	7,408	7,145	263	17,941	16,492	1,449	1,295	1,112	183	*	122	783	140		11	238														

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(Millions of U.S. dollars)

Industry and company size	NAICS code	Worldwide capital expenditures			Foreign capital expenditures			Domestic capital expenditures			Domestic capital expenditures for R&D			Domestic capital expenditures for R&D (type of property)					
		Total	Property, plant, and equipment	Identifiable intangible assets	Total	Property, plant, and equipment	Identifiable intangible assets	Total	Property, plant, and equipment	Identifiable intangible assets	Total	Property, plant, and equipment	Identifiable intangible assets	Land acquisition	Buildings and land improvement	Machinery and equipment	Capitalized software	Other intellectual property	All other
Agricultural implement	33311	2,179	1,966	213	716	713	3	1,464	1,253	210	216	87	129	0	23	50	0 - 129	*	12 - 145
Semiconductor machinery	333242	3,612	3,436	176	1,704	1,703	1	1,908	1,733	175	314	313	1	*	2	273	11	*	27
Engine, turbine, and power transmission equipment	3336	2,304	2,221	83	1,215	1,213	2	1,089	1,008	81	115	108	7	0	26	75	2	0	12
Other machinery	other 333	17,254	16,014	1,240	3,774	3,517	257	13,480	12,497	983	651	605	46	*	71	384	0 - 129	11	54 - 187
Computer and electronic products	334	89,644	61,906	27,738	36,474	29,501	6,973	53,170	32,405	20,766	9,468	6,927	2,540	122	792	5,312	1,064	1,691	487
Communications equipment	3342	5,156	3,374	1,782	934	576	358	4,222	2,798	1,424	731	0 - 732	0 - 732	44	0 - 102	459	128	0 - 102	0 - 102
Semiconductor and other electronic components	3344	55,910	33,324	22,586	23,836	17,630	6,206	32,074	15,694	16,380	5,014	3,969	1,045	37	286	3,218	731	444	299
Navigational, measuring, electromedical, and control instruments	3345	7,911	5,814	2,097	1,732	1,332	400	6,179	4,482	1,697	952	755	198	40	162	430	41 - 207	21 - 217	63 - 189
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	450	397	54	76	55	20	375	341	33	78	62	16	3	8	50	9	7	1
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	2,073	2,003	70	402	387	15	1,671	1,616	54	357	314	43	35	89	122	33	15	63
Other measuring and controlling devices	other 3345	5,388	3,414	1,974	1,254	890	364	4,134	2,524	1,610	517	378	139	2	65	258	0 - 166	0 - 194	0 - 126
Other computer and electronic products	other 334	20,667	19,394	1,273	9,973	9,963	10	10,695	9,431	1,263	2,770	1,471 - 2,205	565 - 1,299	0	240 - 346	1,206	0 - 166	927 - 1,227	0 - 126
Electrical equipment, appliances, and components	335	6,670	6,038	632	2,551	2,390	161	4,119	3,649	471	389	309	80	*	42	190	58	5	94
Transportation equipment	336	68,906	66,253	2,653	15,085	14,411	674	53,820	51,842	1,978	3,652	3,084	568	81	431	2,156	502	263	218
Motor vehicles, bodies, trailers, and parts	3361-63	54,932	53,077	1,855	12,405	11,735 - 12,405	0 - 670	42,528	40,672 - 41,343	1,185 - 1,856	2,813	2,355	458	68	308	1,654	475	98 - 263	42 - 208

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Industry and company size	NAICS code	Worldwide capital expenditures			Foreign capital expenditures			Domestic capital expenditures			Domestic capital expenditures for R&D			Domestic capital expenditures for R&D (type of property)					
		Total	Property, plant, and equipment	Identifiable intangible assets	Total	Property, plant, and equipment	Identifiable intangible assets	Total	Property, plant, and equipment	Identifiable intangible assets	Total	Property, plant, and equipment	Identifiable intangible assets	Land acquisition	Buildings and land improvement	Machinery and equipment	Capitalized software	Other intellectual property	All other
Aerospace products and parts	3364	11,435	10,752	683	2,437	1,767 - 2,438	0 - 670	8,998	8,314 - 8,986	13 - 684	704	595	109	0 - 14	113	401	25	0 - 150	1 - 167
Aircraft, aircraft engine, and aircraft parts	336411-13	10,828	10,150	678	2,409	1,739 - 2,410	0 - 670	8,419	7,740 - 8,412	8 - 679	603	494	109	0	80	353	24	0 - 148	0 - 148
Guided missile, space vehicle, and related parts	336414-15, 336419	607	602	5 i	28	22 - 29	0 - 6	579	573 - 580	0 - 6 i	101	100	*	0 - 14	33	48	1	1	1 - 20
Military armored vehicle, tank, and tank components	336992	7	5	2 r	0	0	0	7	5	2 r	0 - 3	*	0 - 3	0	0	*	0	0 - 3	0
Other transportation	other 336	2,531	2,419	112 i	244	238	5 i	2,288	2,181	107 i	133 - 137	134	0 - 3	0 - 14	10	101 i	2	0 - 16	10
Furniture and related products	337	994	834	161	69	69	0	925	765	161	29	26	2 i	*	4	18	5	1	*
Miscellaneous	339	27,777	21,930	5,847	8,780	7,846	934	18,997	14,084	4,913	2,164	1,466	698	7	158	961	204	449	387
Medical equipment and supplies	3391	20,223	16,757	3,466	7,730	6,862	869	12,493	9,895	2,598	1,936	1,313	623	7	149	842	181	442	316
Other miscellaneous manufacturing	3399	7,554	5,174	2,380	1,050	984	65	6,504	4,189	2,315	228	153	75	0	8	120	23 i	7	71
Nonmanufacturing industries	21-23, 42-81	552,118	480,060	72,058	63,562	58,032	5,530	488,556	422,028	66,528	24,394 i	16,329	8,065 i	341 r	1,342 i	4,496	13,651 i	2,056 i	2,507 i
Mining, quarrying, oil and gas extraction, and support activities	21	27,919	27,721 i	199	3,755 i	3,752 i	4 i	24,164	23,969 i	195	263 - 344	249 - 331	13 i	12	2	78 i	26 i	0 - 209 i	0 - 228
Utilities	22	104,992	102,718	2,275	390	390	0	104,603	102,328	2,275	1,003 i	960 i	43 i	0	0	63 i	50 i	0	890 i
Wholesale trade	42	14,919 i	14,195 i	724 i	651 i	618 i	33 i	14,268 i	13,578 i	690 i	693 - 816 i	497 i	196 - 320 i	*	56 i	138 i	151 i	149 r	197 - 324 i
Electronic shopping and electronic auctions	454111-12	1,086 - 83,088	387 - 82,389	699	0 - 19,383	0 - 19,383	0 - 282	1,086 - 78,607	387 - 77,908	416 - 700	1,087 i	846 i	241	0	0	0 - 408 i	154 - 1,088	0 - 209	0 - 467 i
Transportation and warehousing	48-49	21,698	20,841	858 i	921	638 - 921	0 - 282 i	20,778	19,919 - 20,203	575 - 858 i	261	202	60	0	40	44	109	0	68
Information	51	218,900	173,839	45,060	30,744	27,708	3,036	188,156	146,131	42,025	10,768	6,373 i	4,395	5	608 i	1,661	6,744 i	1,282 i	469
Publishing	511	45,316	35,675	9,642	14,807	13,947	860	30,509	21,728	8,782	2,887	1,093	1,794 i	5	131	570	1,531	525 i	125
Newspaper, periodical, book, and directory publishers	5111	65 i	52	13 i	* i	* i	* i	65	51	13 i	11 i	2	8 i	0	0	* i	7	4 i	0

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Software publishers	5112	45,251	35,623	9,628	14,807	13,946	860	30,445	21,676	8,768	2,877	1,091	1,786	i	5	131	570	1,525	521	i	125	
Telecommunications	517	80,950	66,192	14,758	34	34	*	80,916	66,158	14,758	239	79	161	i	0	*	26	173	*		40	
Data processing, hosting, and related services	518	29,931	14,584	15,347	3,600	2,799	801	26,331	11,785	14,546	3,821	1,563	2,259		0	75	543	2,750	223		230	
Other information	other 51	62,703	57,389	5,314	12,303	10,928	1,375	50,400	46,461	3,939	3,820	3,639	181	i	*	402	521	2,290	533	i	74	
Finance and insurance	52	33,398	21,938	11,460	3,424	1,739	1,685	29,975	20,199	9,776	3,491	2,295	1,197	i	0	10	104	3,256	16	i	105	
Real estate and rental and leasing	53	15,082	14,677	405	55 - 14,674	55 - 14,674	0	409 - 15,027	4 - 14,622	405	243	121	121	i	0	4	3	172	58		5	
Lessors of nonfinancial intangible assets (except copyrighted works)	533	4 - 14,623	4 - 14,622	*	0 - 14,618	0 - 14,618	0	4 - 14,623	4 - 14,622	*	4 - 11	4 - 11	*	i	0	0	0	5	0		0 - 6	
Other real estate and rental and leasing	other 53	460 - 15,078	55 - 14,674	405	56	56	0	404 - 15,023	0 - 14,618	405	231 - 239	110 - 118	121	i	0	4	3	167	58		0 - 6	
Professional, scientific, and technical services	54	27,606	19,189	8,417	4,119	3,627	492	23,487	15,562	7,925	5,028	3,434	1,594	i	324	r	592	1,797	1,676	i	345	
Architectural, engineering, and related services	5413	1,938	1,696	242	227	197	29	1,711	1,498	213	249	195	54		0	24	158	34	r	26	8	
Computer systems design and related services	5415	15,077	10,013	5,064	2,036	1,808	228	13,041	8,205	4,837	2,367	1,398	969	i	0	82	922	1,171	i	65	126	
Scientific research and development services	5417	4,652	3,385	1,267	718	641	76	3,934	2,744	1,190	1,467	1,324	143	i	24	435	669	147		57	i	135
Research and development in nanotechnology	541713	41	39	3	3	3	0	38	35	3	18	15	2		0	*	15	2		*	i	* i
Research and development in biotechnology (except nanobiotechnology)	541714	2,364	1,485	879	298	222	76	2,066	1,263	803	535	522	13		4	211	175	68		12		66
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	2,228	1,849	378	416	416	*	1,811	1,433	378	904	783	121	i	20	224	476	73	i	45	i	66

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Research and development in the social sciences and humanities	541720	19	12	7	*	*	0	19	12	7	10	4	7	0	*	4	4	0	3						
Other professional, scientific, and technical services	other 54	5,939	4,095	1,844	1,139	980	158	4,800	3,115	1,685	945	517	428	300	r	51	48	325	196	26					
Health care services	621-23	3,146	2,557	589	123	123	*	3,022	2,433	589	345 - 436	191 - 414	21 - 154	0		28	i	205	i	95	i	*	i	15 - 109	i
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	1,373 - 83,375	0 - 82,001	1,374	0 - 19,383	0 - 19,383	0 - 282	1,091 - 78,612	0 - 77,520	1,091 - 1,375	914 - 1,215	858 - 1,159	56	i	0	2	i	0 - 408	i	279 - 1,213	0 - 209			0 - 467	i
All companies (number of domestic employees)	-	981,447	852,787	128,661	188,184	170,158	18,026	793,263	682,629	110,634	52,844	39,084	13,760	584	i	5,220	19,665	16,247	i	5,711				5,417	i
Small companies																									
10-19 ^a	-	4,652	4,227	r 425	254	115	139	r 4,398	4,112	r 286	i 474	293	i 181	7	i 33	i 207	i 121	71	35	i					
20-49	-	7,549	6,603	946	i 587	549	38	i 6,962	6,053	908	i 1,719	1,336	382	i 211	r 205	700	247	i 154	i 202						
Medium companies																									
50-99	-	8,101	6,787	1,313	393	318	75	7,708	6,470	1,238	1,733	1,382	351	13	i 322	816	302	63	217						
100-249	-	22,986	17,657	5,330	1,679	1,556	124	21,307	16,101	5,206	3,102	1,616	1,486	34	i 260	983	1,004	i 586	236						
Large companies																									
250-499	-	21,847	14,503	7,344	i 3,319	2,979	339	18,528	11,524	7,004	i 2,835	1,733	1,102	i 31	i 309	805	985	373	331						
500-999	-	25,146	19,504	5,641	2,758	1,993	765	22,388	17,511	4,877	3,012	2,187	825	49	i 320	1,099	1,113	162	269						
1,000-4,999	-	117,595	95,995	21,600	22,793	19,277	3,515	94,802	76,717	18,085	8,427	5,789	2,638	79	983	2,893	2,707	797	967						
5,000-9,999	-	110,249	97,823	12,426	19,370	17,511	1,859	90,879	80,312	10,567	5,864	4,469	1,395	22	297	2,046	2,716	154	628						
10,000-24,999	-	193,815	168,896	24,919	41,897	35,053	6,844	151,918	133,843	18,075	7,891	6,757	1,135	i 64	i 818	4,108	1,371	566	963	i					
25,000 or more	-	469,508	420,792	48,716	95,134	90,806	4,328	374,373	329,985	44,388	17,787	i 13,520	i 4,266	i 74	i 1,672	i 6,008	i 5,682	i 2,784	1,567	i					

* = 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. The "undistributed" column shown in prior years is no longer necessary because of processing improvements implemented beginning in 2015. 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.