

TABLE 38. U.S. patent applications and patents issued for companies with and without R&D activity, by industry and company size: 2011
(Number)

Industry and company size	NAICS code	All companies		With R&D activity ^a		Without R&D activity	
		Applications	Patents issued ^b	Applications	Patents issued ^b	Applications	Patents issued ^b
All industries	21–23, 31–33, 42–81	135,958	101,201	119,366	79,215	16,591	21,986
Manufacturing industries	31–33	82,878	58,124	81,623	57,193	1,255	931
Food	311	2,810	1,276	2,805	1,274	5	2
Beverage and tobacco products	312	566	296	564	295	2	1
Textile, apparel, and leather products	313–316	634	469	625	464	9	5
Wood products	321	121	86	121	86	0	0
Paper	322	1,251	969	1,230	963	21	6
Printing and related support activities	323	279	123	227	114	53	9
Petroleum and coal products	324	693	463	693	463	0	0
Chemicals	325	15,192	8,558	14,777	8,468	415	90
Basic chemicals	3251	4,301	1,302	3,943	1,248	358	54
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	745	506	736	506	10	0
Pesticide, fertilizer, and other agricultural chemical	3253	1,078	700	1,077	700	1	0
Pharmaceuticals and medicines	3254	6,777	4,405	6,768	4,385	9	19
Soap, cleaning compound, and toilet preparation	3256	1,582	1,145	1,575	1,145	7	0
Paint, coating, adhesive, and other chemicals	3255, 3259	708	500	678	484	30	16
Plastics and rubber products	326	2,276	1,572	2,166	1,461	110	110
Nonmetallic mineral products	327	924	476	913	471	11	5
Primary metals	331	463	235	450	227	13	8
Fabricated metal products	332	1,989	1,779	1,817	1,368	172	411
Machinery	333	9,581	6,064	9,499	6,036	82	28
Agricultural implement	33311	661	448	637	442	23	6
Semiconductor machinery	333295	1,244	827	1,243	827	1	0
Engine, turbine, and power transmission equipment	3336	3,331	1,974	3,327	1,973	4	1
Other machinery	other 333	4,345	2,815	4,291	2,794	54	20
Computer and electronic products	334	26,269	23,042	26,207	22,977	62	65
Communications equipment	3342	4,054	3,064	4,054	3,064	0	0
Semiconductor and other electronic components	3344	11,391	10,460	11,384	10,456	7	4
Navigational, measuring, electromedical, and control instruments	3345	5,236	4,394	5,181	4,333	55	61
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	1,692	1,142	1,692	1,142	0	0
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	2,179	2,236	2,179	2,236	0	0
Other measuring and controlling device	other 3345	1,364	1,016	1,309	955	55	61
Other computer and electronic products	other 334	5,588	5,124	5,588	5,124	0	0
Electrical equipment, appliances, and components	335	3,233	2,145	3,216	2,128	17	17
Transportation equipment	336	7,370	4,712	7,213	4,638	157	74
Motor vehicles, bodies, trailers, and parts	3361, 3362, 3363	4,268	2,679	4,118	2,605	151	74
Aerospace products and parts	3364	2,814	1,905	2,814	1,905	0	0
Aircraft, aircraft engine, and aircraft parts	336411–13	2,713	1,830	2,713	1,830	0	0
Guided missile, space vehicle, and related parts	336414–15, 336419	101	75	101	75	0	0

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Military armored vehicle, tank, and tank component	336992	14	2	14	2	0	0
Other transportation equipment	other 336	274	126	267	126	7	0
Furniture and related products	337	521	273	510	259	11	14
Miscellaneous manufacturing	339	8,705	5,588	8,590	5,501	115	87
Medical equipment and supplies	3391	6,362	3,872	6,304	3,822	58	50
Other miscellaneous manufacturing	3399	2,343	1,716	2,286	1,679	57	37
Nonmanufacturing industries	21–23, 42–81	53,080	43,077	37,743	22,021	15,337	21,056
Mining, extraction, and support activities	21	2,872	1,497	2,813	1,482	59	15
Utilities	22	128	30	121	29	7	1
Wholesale trade	42	6,958	3,715	1,880	855	5,078	2,859
Electronic shopping and electronic auctions	454111–12	974	240	961	236	13	4
Transportation and warehousing	48–49	337	35	83	33	254	2
Information	51	16,615	12,828	16,404	12,729	210	99
Publishing	511	9,015	10,501	9,009	10,494	6	7
Newspaper, periodical, book, and directory publishers	5111	25	23	19	16	6	7
Software publishers	5112	8,990	10,478	8,990	10,478	0	0
Telecommunications	517	1,414	970	1,391	959	23	11
Data processing, hosting, and related services	518	1,013	441	892	413	121	28
Other information	other 51	5,172	915	5,112	862	60	53
Finance and insurance	52	1,126	582	902	497	224	85
Real estate and rental and leasing	53	432	317	381	317	51	0
Lessors of nonfinancial intangible assets (except copyrighted works)	533	265	283	265	283	0	0
Other real estate and rental and leasing	other 53	167	34	116	34	51	0
Professional, scientific, and technical services	54	12,061	6,439	11,635	4,833	426	1,606
Architectural, engineering, and related services	5413	1,979	940	1,765	896	213	44
Computer systems design and related services	5415	2,695	1,084	2,614	1,081	81	3
Scientific research and development services	5417	6,125	2,600	6,041	2,555	84	45
Biotechnology research and development	541711	2,993	1,030	2,975	1,021	18	9
Physical, engineering, and life sciences (except biotechnology) research and development	541712	3,120	1,568	3,054	1,532	66	36
Social sciences and humanities research and development	541720	13	2	13	2	0	0
Other professional, scientific, and technical services	other 54	1,262	1,815	1,214	302	48	1,514
Health care services	621–23	1,752	104	252	104	1,500	0
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	9,825	17,291	2,310	907	7,515	16,384
All companies (number of domestic employees)	–	135,958	101,201	119,366	79,215	16,591	21,986
Small companies ^c							
5–499	–	48,267	36,852	32,334	15,239	15,933	21,613
5–99	–	36,387	30,068	20,785	8,565	15,602	21,503

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5-49	-	27,277	24,584	15,733	5,781	11,543	18,802
5-9	-	5,830	18,165	3,830	1,203	1,999	16,962
10-24	-	12,279	3,993	5,431	2,850	6,848	1,143
25-49	-	9,168	2,425	6,472	1,728	2,696	697
50-99	-	9,111	5,485	5,052	2,784	4,059	2,701
100-249	-	6,368	2,961	6,098	2,877	270	84
250-499	-	5,511	3,823	5,450	3,797	61	26
Medium and large companies							
500-999	-	3,998	2,682	3,977	2,663	21	19
1,000-4,999	-	18,706	12,514	18,538	12,423	168	91
5,000-9,999	-	10,031	8,136	9,945	8,076	86	60
10,000-24,999	-	21,381	11,157	21,310	11,124	71	33
25,000 or more	-	33,575	29,859	33,263	29,689	312	170

NAICS = 2007 North American Industry Classification System.

^a Statistics are representative of companies located in the United States that performed or funded R&D.

^b For a small number of companies issued more than 100 patents by the U.S. Patent and Trademark Office (USPTO), counts from USPTO.gov were used to supplement survey data.

^c Upper bound based on U.S. Small Business Administration's definition of a small business: Business R&D and Innovation Survey does not include companies with fewer than five domestic employees.

NOTES: Detail may not add to total because of rounding. Industry classification based on dominant business code for domestic R&D performance where available. For companies that did not report business codes, classification used for sampling was assigned. Statistics are based on companies in the United States that reported to the survey. These statistics do not include an adjustment to the weight to account for unit nonresponse.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics and U.S. Census Bureau, Business R&D and Innovation Survey, 2011.