

Table SINV-17

## International patent families granted in control, by region, country, or economy: 1998–2020

(Number)

Region, country, or economy	Economy by income status	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
World	na	6,171	6,604	5,690	5,592	5,666	6,563	6,975	6,217	7,268	7,256	7,257	8,041	9,073	10,417	12,474	12,785	13,489	13,451	16,542	19,208	20,039	20,673	23,584
North America	na	1,249	1,266	1,305	1,234	1,176	1,364	1,451	1,128	1,506	1,272	1,422	1,382	1,690	1,650	1,897	1,977	2,131	2,051	2,087	2,507	2,556	2,892	2,821
Canada	High	51	57	50	53	58	51	63	51	60	52	61	56	82	69	85	110	109	94	97	122	129	138	132
Mexico	Upper middle	1	0	1	0	2	1	2	2	1	0	1	3	1	2	4	2	2	3	15	10	18	18	11
United States	High	1,197	1,208	1,253	1,181	1,116	1,311	1,386	1,075	1,444	1,220	1,361	1,323	1,607	1,580	1,809	1,865	2,019	1,953	1,976	2,375	2,409	2,737	2,678
Central America and Caribbean	na	1	1	0	1	0	1	0	1	1	3	1	2	1	1	1	0	1	0	2	2	2	2	1
Puerto Rico	High	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South America	na	4	3	8	8	9	7	5	6	8	4	7	12	8	15	9	10	10	18	23	22	28	29	42
Argentina	Upper middle	1	1	2	2	1	2	1	1	2	0	0	1	0	0	0	0	2	2	3	1	3	2	1
Brazil	Upper middle	3	1	5	5	7	4	4	5	6	3	6	10	8	14	9	7	8	14	15	19	23	26	38
Europe	na	1,459	1,384	1,345	1,284	1,308	1,667	1,874	1,498	1,592	1,414	1,505	1,465	1,439	1,430	1,646	1,557	1,593	1,696	1,729	2,063	2,030	2,047	1,986
EU-27 + UK <sup>a</sup>	na	1,160	1,161	1,122	1,094	1,083	1,326	1,453	1,162	1,224	1,043	1,120	1,046	1,033	1,069	1,213	1,207	1,198	1,227	1,369	1,593	1,541	1,602	1,535
United Kingdom	High	140	125	140	117	126	178	194	138	140	121	117	106	99	92	93	85	97	111	119	129	126	119	158
EU-27 <sup>b</sup>	na	1,020	1,036	983	978	958	1,148	1,259	1,024	1,084	922	1,003	940	934	977	1,120	1,122	1,101	1,116	1,249	1,465	1,415	1,483	1,377
Austria	High	15	23	17	21	28	28	29	28	43	31	44	30	39	51	61	45	52	56	55	57	51	72	50
Belgium	High	12	8	8	11	4	6	8	8	6	8	8	9	6	5	6	3	7	18	26	18	20	21	20
Denmark	High	6	6	4	13	10	11	8	10	7	3	9	9	13	10	11	19	13	13	17	12	24	22	20
Finland	High	12	6	7	16	19	26	33	22	20	13	20	25	20	16	26	33	28	30	27	24	25	22	30
France	High	200	190	189	197	202	257	237	231	258	172	181	209	186	155	200	211	192	201	249	226	227	229	214
Germany	High	394	393	349	405	422	507	547	436	507	440	496	409	397	402	486	507	498	478	544	568	605	698	658
Hungary	High	4	3	1	3	5	3	1	2	7	3	2	2	2	2	5	2	7	2	3	4	1	4	6
Ireland	High	10	9	4	4	4	5	5	8	10	8	7	9	6	12	10	11	11	10	13	9	16	15	24
Italy	High	121	168	188	82	62	74	168	70	23	17	26	23	49	66	59	30	21	32	35	210	162	109	77
Netherlands	High	67	62	61	57	70	48	59	50	57	51	55	57	47	58	55	58	45	37	39	56	54	58	52
Spain	High	82	67	58	62	27	80	43	69	67	73	54	59	67	81	76	87	107	88	66	69	58	48	34
Sweden	High	36	42	43	34	46	55	68	44	36	34	41	39	46	42	47	59	49	68	67	81	69	84	103
Other Europe	na	299	223	222	189	225	341	421	335	368	371	385	419	406	361	433	349	395	469	360	470	489	445	451
Other Europe-2020 <sup>b</sup>	na	439	348	362	306	350	519	614	474	508	492	502	525	505	453	525	435	492	580	480	599	615	564	608
Belarus	Upper middle	0	1	3	1	0	2	2	4	4	1	2	2	5	1	5	1	1	2	0	1	1	1	1
Moldova	Lower middle	0	0	1	1	1	2	2	4	4	4	2	1	4	5	3	2	2	0	1	2	1	3	0
Norway	High	7	7	6	8	11	10	9	18	17	18	12	15	15	15	13	13	12	15	14	6	15	10	21
Russia	Upper middle	241	178	179	125	166	233	260	246	274	277	274	314	306	280	343	251	289	372	262	378	392	358	372
Switzerland	High	36	30	27	42	30	49	40	36	52	31	45	39	40	33	40	46	51	44	41	59	52	50	48

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Ukraine	Lower middle	13	4	4	12	15	44	106	27	17	40	46	43	29	21	27	30	33	28	35	18	24	12	2
Asia	na	3,336	3,802	2,859	2,914	3,011	3,269	3,378	3,410	3,982	4,433	4,192	5,051	5,810	7,200	8,775	9,098	9,603	9,534	12,559	14,453	15,238	15,518	18,561
China	Upper middle	17	17	37	43	56	113	170	134	194	229	581	1,341	1,474	1,971	2,578	2,699	3,306	5,064	7,206	9,100	9,331	9,405	11,859
India	Lower middle	0	0	1	2	5	2	7	4	11	7	11	13	19	29	25	52	58	56	75	103	118	144	163
Japan	High	3,056	3,058	2,465	2,486	2,460	2,523	2,504	2,493	2,721	2,863	2,686	2,937	3,221	3,676	4,457	4,290	4,119	2,742	3,410	3,173	3,650	3,610	3,864
Malaysia	Upper middle	1	1	1	1	0	1	1	1	3	7	3	1	3	3	4	6	12	10	10	17	14	4	4
Singapore	High	3	3	5	4	3	6	7	7	9	5	9	13	18	11	12	12	7	11	16	25	26	21	14
South Korea	High	204	672	277	289	369	458	501	630	825	1,060	703	564	819	1,254	1,328	1,540	1,559	1,196	1,420	1,596	1,748	1,964	2,407
Taiwan	High	54	52	73	89	117	165	185	139	214	260	198	179	254	253	368	491	533	449	408	433	345	360	246
Middle East	na	14	21	21	20	17	28	25	11	25	20	20	25	25	28	40	38	52	57	49	71	81	90	72
Israel	High	12	18	17	18	15	25	23	10	22	16	17	23	20	24	31	26	38	41	39	55	58	60	52
Africa	na	45	37	23	34	29	32	34	33	14	29	32	25	26	13	18	24	25	9	14	10	20	17	14
South Africa	Upper middle	38	24	18	28	23	28	27	32	12	27	32	24	25	7	14	16	13	6	5	5	7	6	6
Australia and Oceania	na	45	58	63	97	113	193	195	106	100	78	76	78	73	78	83	78	73	85	77	81	84	77	84
Australia	High	43	55	62	94	107	189	191	102	96	74	71	74	69	70	74	69	62	75	68	75	79	74	80
New Zealand	High	2	3	1	3	6	3	4	3	3	5	6	4	4	8	9	9	11	10	9	5	5	3	4
Unclassified	na	17	33	67	1	3	1	12	25	43	2	1	2	1	1	3	3	0	1	3	0	1	0	2

na = not applicable, metric not calculated at this level.

EU = European Union; UK = United Kingdom.

<sup>a</sup> The United Kingdom was a part of the EU for data purposes from 1973 to 2019.<sup>b</sup> Beginning in 2020, the United Kingdom was no longer a member of the EU.**Note(s):**

International Patent Documentation (INPADOC) patent families across all patent offices covered in the Worldwide Patent Statistical Database (PATSTAT) are counted according to the year of the first granted patent in the patent family. Patent families are allocated according to patent inventorship information found on the priority patent of the INPADOC patent families. To account for missing ownership information in PATSTAT for some offices, a method designed by de Rassenfosse et al. (2013) is used to fill missing information on priority patents using information in successive filings within the families. Priority patents not indexed in PATSTAT are replaced by the next utility patent(s) in the families according to filing dates. Patent families are fractionally allocated among regions, countries, or economies based on the proportion of residences of all named inventors. Patents are classified under the World Intellectual Property Organization (WIPO) classification of patents, which classifies International Patent Classification (IPC) codes under 35 technical fields. IPC reformed codes take into account changes that were made to the WIPO classification in 2006 under the eighth version of the classification and were used to prepare these data. China includes Hong Kong. Data were extracted in June 2021. Because of data coverage issues for some patent offices in PATSTAT, statistics for some countries may be underestimated partially for some years or across the whole trend. Countries with identified issues include India (missing data) and South Africa (no data for 2018). For Italy, because of data gaps regarding information on granted patents, patent applications are used instead, which slightly overestimates Italy's output and creates a small shift in year for which its output is accounted. As patent authorities become more involved with the European Patent Organisation, these gaps should disappear in the future, strengthening the robustness of statistics for these countries.

**Source(s):**

National Center for Science and Engineering Statistics; Science-Metrix; PATSTAT, accessed October 2021.