

Table SINV-41

## International patent families unassigned under the WIPO classification, 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	3,601	4,893	3,809	10,393	7,017	5,455	7,134	4,518	7,199	11,669	11,765	10,966	9,903	9,836	10,277	11,404	10,949	7,090	3,529	4,552	5,281	6,739	5,007
North America	na	161	251	177	111	103	82	87	93	186	177	151	211	195	160	171	161	134	139	108	113	113	179	134
Canada	High	10	17	13	10	7	7	7	6	18	9	5	22	24	22	21	33	29	34	24	24	33	25	23
Mexico	Upper middle	0	0	2	1	1	0	0	0	1	2	0	1	2	0	1	0	0	1	0	1	1	1	1
United States	High	151	234	163	101	95	74	81	87	166	165	145	188	170	138	149	127	105	104	84	88	79	152	110
Central America and Caribbean	na	0	1	2	1	0	0	0	4	6	0	3	4	1	3	3	3	0	0	0	0	0	1	1
Puerto Rico	High	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South America	na	1	1	1	7	4	4	6	3	15	18	30	18	31	29	28	37	29	15	16	14	10	18	9
Argentina	Upper middle	0	0	0	2	3	4	3	1	6	8	15	13	20	19	16	25	22	7	6	3	3	5	1
Brazil	Upper middle	1	0	1	4	0	0	4	2	5	8	14	5	9	6	6	10	5	6	5	7	5	11	6
Europe	na	1,967	2,406	2,614	5,999	4,343	4,006	5,629	3,276	5,529	10,419	10,437	9,601	8,886	8,724	9,394	10,548	10,244	6,262	2,651	3,625	4,592	5,580	4,214
EU-27 + UK <sup>a</sup>	na	1,938	2,347	2,567	3,522	3,919	3,053	5,556	3,224	5,456	10,350	10,352	9,519	8,784	8,629	9,286	10,420	10,105	6,143	2,557	3,506	4,483	4,890	3,198
United Kingdom	High	469	435	377	401	416	452	417	328	363	350	536	717	1,151	1,546	1,994	1,859	1,999	1,839	1,762	1,803	1,791	1,902	1,847
EU-27 <sup>b</sup>	na	1,469	1,912	2,190	3,120	3,504	2,602	5,138	2,896	5,093	9,999	9,816	8,802	7,633	7,083	7,292	8,561	8,106	4,304	796	1,703	2,692	2,988	1,350
Austria	High	6	9	3	10	8	3	6	2	224	335	15	22	15	6	11	6	7	8	12	10	30	3	8
Belgium	High	7	3	5	3	5	10	12	7	20	28	48	76	118	116	174	173	185	216	243	130	92	74	67
Denmark	High	3	3	4	5	3	4	4	2	0	8	9	13	11	7	15	19	20	15	16	23	23	26	19
Finland	High	1	2	2	4	11	7	4	3	9	6	10	16	36	29	32	33	36	53	22	15	10	9	10
France	High	11	11	11	18	16	34	30	29	53	91	66	81	82	78	70	58	56	49	40	33	42	46	78
Germany	High	32	20	17	13	37	23	17	18	47	51	51	61	67	79	73	95	88	93	87	91	106	120	70
Hungary	High	3	5	3	5	8	5	1	2	2	1	1	2	3	6	6	9	3	7	8	2	2	3	1
Ireland	High	6	4	3	2	6	5	1	2	3	3	6	8	6	14	23	21	21	18	20	19	33	34	35
Italy	High	1,317	1,760	2,067	2,962	3,124	2,438	4,996	2,760	4,579	9,299	9,358	8,413	7,165	6,631	6,767	8,003	7,566	3,719	189	1,251	2,214	2,507	907
Netherlands	High	4	8	11	11	11	18	13	10	17	17	18	28	20	26	26	32	33	40	57	48	50	57	41
Spain	High	16	27	15	17	15	15	13	18	14	23	21	18	19	21	15	19	14	12	8	12	16	6	8
Sweden	High	28	22	6	10	10	19	10	10	15	22	41	46	42	37	38	44	34	29	42	39	42	46	54
Other Europe	na	30	59	48	2,477	424	953	74	52	73	70	85	82	101	95	108	128	139	118	94	119	109	690	1,016
Other Europe-2020 <sup>b</sup>	na	499	494	424	2,879	840	1,405	491	380	436	420	621	799	1,252	1,641	2,102	1,987	2,138	1,958	1,855	1,922	1,900	2,592	2,864
Belarus	Upper middle	0	0	1	2	5	6	4	10	1	0	5	6	9	7	5	7	1	0	0	1	0	0	0
Moldova	Lower middle	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0
Norway	High	7	5	2	5	5	10	5	5	8	5	7	11	21	28	26	33	55	50	35	50	45	54	52
Russia	Upper middle	6	3	1	440	7	1	5	3	6	12	12	7	8	6	4	8	4	5	15	14	7	4	12
Switzerland	High	7	14	8	16	21	20	19	12	34	40	51	44	53	43	52	70	66	52	31	28	45	56	46

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Ukraine	Lower middle	4	30	22	2,001	362	906	30	14	16	3	2	6	2	4	10	1	1	1	1	17	1	563	891
Asia	na	860	1,696	513	3,726	1,926	734	788	729	879	656	751	669	485	443	409	408	326	308	370	378	336	336	344
China	Upper middle	43	85	115	107	51	84	110	129	186	35	73	67	43	66	82	78	25	55	54	55	41	103	97
India	Lower middle	1	2	2	6	4	4	4	1	4	7	15	20	13	18	15	14	14	16	16	21	24	34	49
Japan	High	131	150	117	117	155	100	77	101	129	186	244	293	278	161	163	159	163	118	51	31	36	55	77
Malaysia	Upper middle	0	0	0	0	1	6	2	10	7	16	150	129	5	55	29	13	10	11	35	19	26	1	3
Singapore	High	1	1	1	1	4	1	2	0	11	16	31	49	75	72	81	74	88	74	69	49	68	78	73
South Korea	High	665	1,415	237	3,417	1,576	398	483	394	401	310	114	50	37	18	24	51	10	16	117	175	104	40	21
Taiwan	High	19	41	38	77	133	137	109	78	118	83	122	59	33	48	13	11	9	8	22	14	27	15	17
Middle East	na	3	16	22	7	29	15	10	37	68	51	56	65	121	124	128	137	120	97	53	52	43	42	40
Israel	High	1	2	1	1	9	2	3	5	11	18	33	52	95	106	113	124	76	66	35	36	25	32	31
Africa	na	44	51	45	46	58	60	63	51	260	188	160	236	79	251	44	54	64	242	307	350	165	569	248
South Africa	Upper middle	31	38	20	18	29	35	39	32	93	48	51	76	24	248	38	38	42	234	300	344	158	555	241
Australia and Oceania	na	437	379	400	483	491	482	488	262	223	156	163	162	105	97	96	56	30	23	17	16	21	13	16
Australia	High	435	377	399	482	489	476	485	261	215	140	129	94	46	26	37	17	15	17	13	11	19	12	14
New Zealand	High	2	2	2	0	3	5	3	1	8	16	34	68	59	71	59	38	15	6	4	5	2	1	2
Unclassified	na	127	93	34	12	62	72	62	63	35	3	14	0	1	4	4	2	2	4	7	6	3	1	1

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

EU = European Union; UK = United Kingdom; WIPO = World Intellectual Property Organization.

<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 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.