2023 Edition

IP5 Statistics Report

Europäisches Patentamt
European Patent Office
Office européen des brevets

JPO

Korean Intellectual Property Office

UNITED STATES PATENT AND TRADEMARK OFFICE
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European Patent Office /// Japan Patent Office ///
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United States Patent and Trademark Office

IP5 Statistics Report

2023 Edition

IP5 Statistics Report 2023 Edition

European Patent Office,
Japan Patent Office,
Korean Intellectual Property Office,
China National Intellectual Property Administration,
United States Patent and Trademark Office

Edited by
KIPO, November 2024

IP5 Statistics Report
2023 Edition

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2023 Edition

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Executive Summary

The IP5 Statistics Report (IP5 SR) is an annual compilation of patent statistics for the five largest intellectual property (IP) offices – the IP5 Offices – namely the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the China National Intellectual Property Administration (CNIPA) and the United States Patent and Trademark Office (USPTO).

Worldwide patenting activity until 2022[1]:

- At the end of 2022, 17.2 million patents were in force in the world (+4.8 percent). 91 percent of these patents were in force in one of the IP5 Offices' jurisdictions.

- In 2022, 3.5 million patent applications were filed worldwide, either as direct national, direct regional or international phase Patent Cooperation Treaty (PCT) applications, of which 93 percent originated from the IP5 regions (IP5 Blocs).

- In 2022, 77 percent of the worldwide patent applications were filed as direct national applications. The proportion of applications filed via the PCT remained stable.

IP5 Offices patenting activities in 2023:

- In 2023, 3.0 million patent applications were filed at the IP5 Offices (+2.9 percent).

- Together the IP5 Offices granted more than 1.7 million patents in 2023 (+9.4 percent).

- In 2023, the main developments at the IP5 Offices were:

    - Annual IP5 high-level events: On June 15, 2023, the USPTO hosted the meeting of the IP5 Heads of Office in Honolulu, Hawaii. The IP5 Heads reaffirmed their commitment to addressing climate change through an accessible and inclusive IP system and encouraged discussions on IP5 office-led initiatives and programs on climate-related innovations. During their meeting, the Heads of Office also endorsed the progress of the ongoing IP5 working group projects, including the implementation of the IP5 New Emerging Technologies/Artificial Intelligence (NET/AI) roadmap, efforts to harmonize drawing requirements, and the exploration of creating a global assignment system. The Offices acknowledged the importance of the United Nations Sustainable Development Goals and explored ways to collaborate to provide additional value to users and incorporate sustainability into the IP5 framework. They also amended the 2017 IP5 Vision Statement to broaden the scope of the IP5's work, particularly in relation to efforts to build a sustainable future and enhance and streamline the IP system. The new 2023 IP5 Vision Statement was adopted and published on the IP5 website on June 20, 2023. As a result of discussions on promoting sustainability and providing helpful resources and incentives to users, the IP5 Offices affirmed their commitment to exploring collaboration opportunities on sustainable innovations to bring these innovations to impact.

[1] The most recent worldwide data available (see Chapter 3).

- At the IP5 Offices in 2023, the applications increased by 4 percent at the CNIPA and the JPO, by 3 percent at the EPO, by 2 percent at the KIPO and by less than 1 percent at the USPTO. The data showed annual growth of 3 percent for overall applications at the IP5 Offices (See Chapters 2 and 4 of this report).

- EPO: 2023 marked the 50th anniversary of the European Patent Convention (EPC). The Unitary Patent and Unified Patent Court (UPC) were launched in June. The EPO introduced the Observatory on Patents and Technology, the Modular IP Education Framework (MIPEF) designed to be integrated into university curricula and launched a new EPO website. The EPO has made significant strides in enhancing environmental sustainability. Demand for patents grew further by 2.9 percent to 199,275 European patent applications. By the end of 2023, 99.5 percent of patent grant actions were successfully digitalised.

- JPO: The JPO has been aiming to achieve the “world”s fastest and utmost quality patent examinations”, and implementing various measures focused on “maintaining speed”, “granting high quality rights.” In 2023, the JPO received 300,133 patent applications, and the total pendency and the first action pendency were 14.0 and 9.5 months on average, respectively. Furthermore, in 2023, first action pendency from request for accelerated examination was 2.2 months on average.

- KIPO: The annual average first office action pendency period was 16.1 months for patents and utility models. KIPO received a preliminary total of 556,600 applications filing for patents, utility models, industrial designs, and trademarks in 2023. The number of PCT applications filed to KIPO increased by 1.1 percent from 21,916 in 2022 to 22,166 in 2023. The Korean language is also the 4th most commonly used language as an official PCT publication language.

- CNIPA: In 2023, the CNIPA was adjusted into an institution directly under the State Council, and an inter-ministerial joint conference system was established to improve China's IP competitiveness. Major policies such as the Special Action Plan for Patent Transformation and Utilisation (2023-2025) were implemented. CNIPA further improved the quality of IP examination and made efforts to provide more convenient and efficient services, the average pendency for the examination of invention patents was reduced to 16 months.

- USPTO: In 2023, the USPTO released its 2022-2026 strategic plan with the ultimate goal to propel innovation, entrepreneurship, and creativity for the benefit of people around the world. The USPTO announced a collaboration with the National Oceanic and Atmospheric Administration and a special category of its Patents for Humanity Program to incentivize greater innovation in climate and green technology areas. In September of 2023, the USPTO issued the 1 millionth design patent.

Preface

The IP5 Statistics Report (IP5 SR) is jointly produced by the "IP5 Offices," which consist of the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the China National Intellectual Property Administration (CNIPA), and the United States Patent and Trademark Office (USPTO), along with the support of the International Bureau (IB) of the World Intellectual Property Organization (WIPO). It follows on from a provisional Key IP5 statistical indicators report published in springtime. The latest reports, along with other data exchanges and information about the IP5 Offices, can be found at www.fiveipoffices.org.

Political and economic conditions as well as technological factors influence the levels of patent filings which in turn contribute to economic growth. There is a worldwide tendency to harmonize patent laws with common international standards and to facilitate filing of applications across borders. Common vehicles to ease patent prosecution across different jurisdictions such as the PCT, validation agreements and the Patent Prosecution Highway (PPH) have had a positive impact on worldwide patent growth over recent years.

While applications are user driven, grants show the production capacity of the offices. The IP5 Offices hope that this report provides useful information to the readers. The IP5 Offices will continue to improve and refine the report to better serve user needs. Definitions related to the terminology used in the report are given in Annexes 1 and 2.

When reading this report, please bear in mind that the procedures and practices among the IP5 Offices differ in many aspects. Therefore, caution should be applied when analysing, interpreting and especially comparing the various statistics.

Materials from this report can be freely reproduced in other publications, but the IP5 Offices request that this should be accompanied by a reference to the title and the website location of this report. Please note the links to the statistics available at each Office:

www.fiveipoffices.org/resources/annualreports

For users wishing to explore the patent statistics in detail there is a set of statistical tables accompanying this report that show extended time series and graphs for most of the data available in this report and a glossary of patent related terms.

EPO, JPO, KIPO, CNIPA, and USPTO
With the cooperation of WIPO

Table of Contents

Tables

Graphs

Chapter 1

INTRODUCTION

IP refers to a variety of mechanisms that have been established for protecting "creations of the mind"[2], including:

- Patents for invention
- Utility models
- Trade secrets
- Industrial designs
- Trademarks
- Geographic indications

to protect industrial innovations, and

- Copyrights

for literary and artistic creations.

This report focuses on industrial property rights and almost exclusively on patents for inventions[3]. It is notable that the patenting activity for inventions is recognized throughout the world as a useful indicator of innovative activity.

In order to obtain protection for their innovations, applicants for patents for invention may use the following types of granting procedures, or combinations of them:

- National procedures
- Regional procedures (for example, those created by the African, Eurasian, European and Gulf regional organizations)
- The PCT procedure

Each country and region maintains its own patent procedures in order to encourage innovative activities and to optimize the regional benefits of innovation. Enhanced international cooperation led to the establishment of different regional and international granting procedures. However, the patent laws vary from country to country. Similarly, the scope of an individual patent application can also differ depending on the applicable jurisdiction. These factors limit the degree to which patenting activity in different countries and regions can be compared directly.

The patent systems at the IP5 Offices are all based on the first-to-file principle and follow the Paris Convention. To a large extent, this drives the usage of the patent systems worldwide. A first patent application is usually filed with the domestic national authority in charge of granting the right to protect the invention, followed within a one year priority period by subsequent applications to expand protection to other countries.

Separate references are made to "direct" applications filed under national and regional procedures and "PCT" international phase applications, in order to distinguish the two

[2] See also, World Intellectual Property Organization, "What is Intellectual Property?" www.wipo.int/about-ip/en/ and World Intellectual Property Indicators, www.wipo.int/publications/
[3] Patents for invention are called utility patents in the case of the USPTO which are different from utility model patents as explained in Chapter 6.

subsets of applications handled by the patent offices. While applications filed under national procedures are handled by national authorities, regional applications are subject to a centralized procedure and usually fall under national (post grant) regulations only after grant. PCT applications are handled at first by the appointed offices during the international phase. Up to about 30 months after the first filing, the PCT applications enter the national/regional phase to be treated as national or regional applications according to the regulations of each designated office.

In this report, patenting activities are presented for the following six geographical blocs:

- The European Patent Convention (EPC) contracting states (EPC states in this report) corresponding to the territory of the states party to the EPC at the end of reporting year:
- Japan (Japan in this report);
- Republic of Korea (R. Korea in this report);
- People's Republic of China (P.R. China in this report);
- United States of America (U.S. in this report);
- The rest of the world (Others in this report).

The first five of these blocs are called the "IP5 Blocs." Throughout the report, the blocs are referred to as blocs of origin on the basis of the residence of the applicant or as filing blocs on the basis of the place where the patents are sought.

The contents of each chapter in this report are briefly described below. With the exception of some items presented in Chapter 6, the statistics relate to patents for invention.

Please refer to Annex 2 for explanations of the statistical and procedural terms that are used.

Together with this report, there is an annex including a glossary of patent-related terms and a statistical table file that includes extended time series and graphs of most of the data found in this report[4].

Chapter 2 - The IP5 Offices

A summary of the recent developments in each of the IP5 Offices is presented in Chapter 2. The terminologies for the budget items that appear are provided in Annex 1.

Chapter 3 - Worldwide Patenting Activity

An assessment of worldwide patent activity is presented in Chapter 3. This covers not only patenting activity at the IP5 Offices, but in the rest of the world as well.

The numbers of applications filed are presented in separate sections that use different definitions for counting. This provides a description of worldwide bloc-wise patenting activity for filings, first filings, applications, demands for national patent rights, grants and national patent rights granted. Next, a description of inter-bloc activity is presented, firstly in terms of the flows of applications between the IP5 Blocs, and then in terms of patent families[5].

[4] www.fiveipoffices.org/statistics
[5] For a further discussion of patent families, see Chapter 3 and the term definitions in Annex 2.

The statistics are mainly derived from the WIPO Statistics Database[6],that includes data from each country and region.

Chapter 4 – Patent Activity at the IP5 Offices

The substantive activities of the IP5 Offices are presented in Chapter 4. This gives statistics on patent application filings and grants at the offices, as well as some comparative data on operations. The statistics are derived from IP5 Offices' internal databases.

Firstly, statistics are given for requests for patents with the IP5 Offices, including domestic and foreign filing breakdowns. Then, statistics are provided displaying the breakdown of applications by sectors and fields of technology according to the International Patent Classification (IPC)[7].

Then, the numbers of grant actions by the IP5 Offices are provided, broken down by the blocs of origin of the grants. The distributions of the numbers of grants per applicant are also included.

To illustrate the similarities as well as the differences in the granting procedures at the IP5 Offices, characteristics and statistics of the five patent granting procedures are given in the last part of the chapter.

Chapter 5 – The IP5 Offices and the Patent Cooperation Treaty (PCT)

In Chapter 5, the influence of the PCT on patenting activities is displayed through worldwide activities broken down by geographical blocs and IP5 Offices, particularly in terms of proportions of patent filings that use the PCT, proportions of PCTs from the international phase that subsequently enter the national/regional phase, the share of PCTs among applications, the share of PCTs among grants and the proportions of PCT usage within patent families. As with Chapter 3, statistics are derived primarily from the WIPO Statistics Database, that includes data collected from each country and region. Statistics are also included to describe the PCT related activities of the IP5 Offices including activities as Receiving Office (RO), International Searching Authority (ISA) and International Preliminary Examining Authority (IPEA).

Chapter 6 – Other Work

This chapter is dedicated to some other patenting activities that are not common to all of the IP5 Offices, as well as to work related to other types of industrial property rights. This supplements the information that is provided in the rest of the report.

[6] The data refer to general patent data as of April, of the year following the reporting period, and to PCT international phase application data as of May of the year following the reporting period, www.wipo.int/ipstats/en/index.html
[7] www.wipo.int/classifications/ipc/en/

Annex 1 – Definitions for IP5 Offices' expenditures

This explains some terms that appear in Chapter 2.

Annex 2 – Definitions of terms and statistics on procedures

This gives more detailed information on the statistics that appear in the report, particularly for Table 4.3 in Chapter 4.

Annex 3 – Acronyms

This writes acronyms in full and in each case refers to the page of first occurrence of the acronym.

Chapter 2

THE IP5 OFFICES

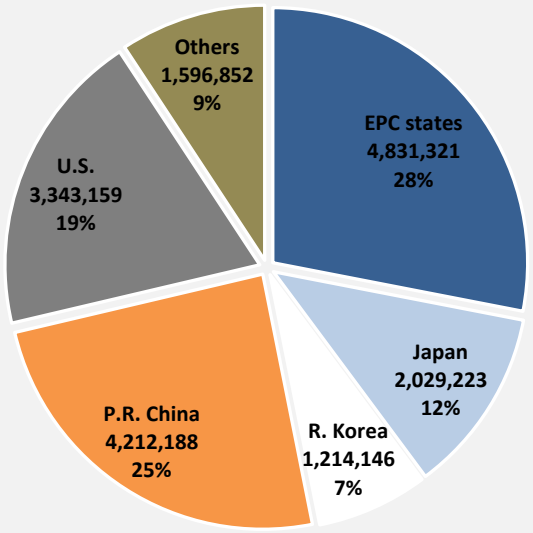
This chapter details developments at each of the IP5 offices[8].

International trade and markets continue to be of great importance, such that innovators want their intellectual creations to be protected concurrently in multiple major markets.

PATENTS IN FORCE

Patents are used to protect inventions and their counts are recognized as a measure of innovative activity. Figure 2.1 shows the number of patents in force worldwide at the end of 2022. The data are based on worldwide patent information available from the WIPO Statistics Database[9].

Fig. 2.1: PATENTS IN FORCE END OF 2022

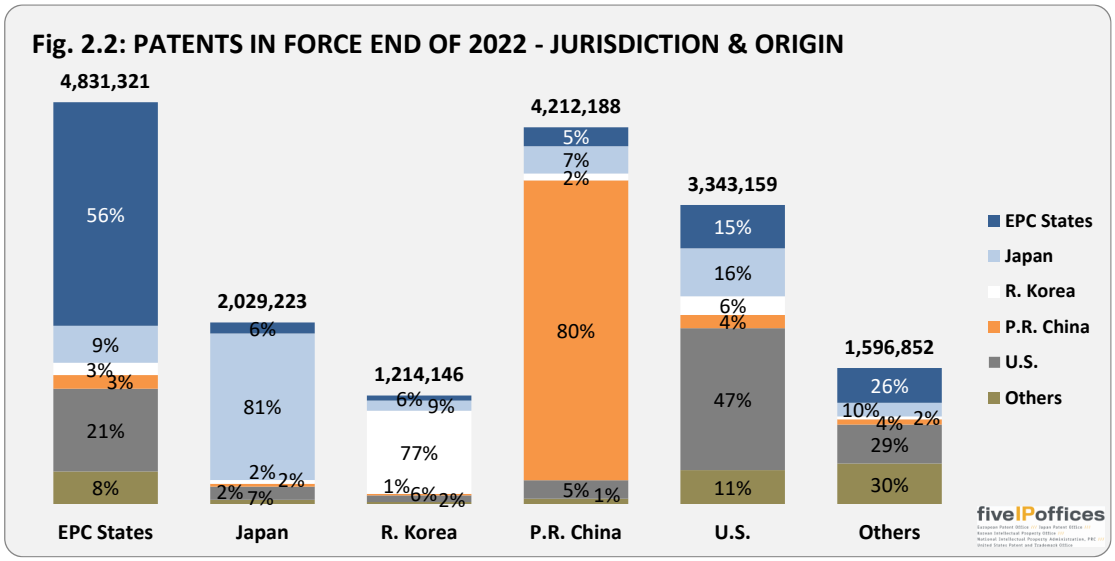


At the end of 2022, 91 percent of the 17.2 million patents that were in force were valid in one of the IP5 Offices jurisdictions. This demonstrates the prominent role that is played by the IP5 Offices.

[8] The statistical tables file found in the web version of this report includes extended time series for some of the data included in this chapter. www.fiveipoffices.org/statistics/statisticsreports

[9] www.wipo.int/ipstats/en/index.html Data for patents in force for 2022 are missing for some countries in the WIPO data. Where available, the most recent previous year's data were substituted for missing 2022 data. Data for 2023 are not yet available from WIPO.

Figure 2.2 shows the residence of the holders of the patents in force at the end of 2022 in the regions of the IP5 Offices.



At the end of 2022, out of the 17.2 million patents in force, 28 percent were valid in the EPC states, 25 percent in P.R. China, 19 percent in the U.S., 12 percent in Japan, and 7 percent in R. Korea.

In 2022, while 81 percent of the patents valid in Japan originated in Japan[10], 47 percent of the U.S. patents had a U.S. origin. For EPC States, the corresponding shares was 56 percent, it was 80 percent for P.R. China, and 77 percent for R. Korea.

[10] Patent origin is based on the patent's first-named inventor or applicant.

IP5 CROSS FILINGS

As shown below, more and more first filings from the IP5 Offices result in subsequent patent applications to at least one other IP5 Office, accounting for over 500,000 applications including the resulting duplicates for the same inventions. To address the issue of the potentially resulting backlogs, the IP5 Offices are working together to try to reduce the amount of duplication of similar work that takes place between offices for such patent applications.

Figure 2.3 shows the development of the number of cross filings between the IP5 Offices filed over the period 2017 to 2021 according to the bloc of the corresponding first filing.

Fig. 2.3: IP5 CROSS FILINGS BY BLOC OF ORIGIN

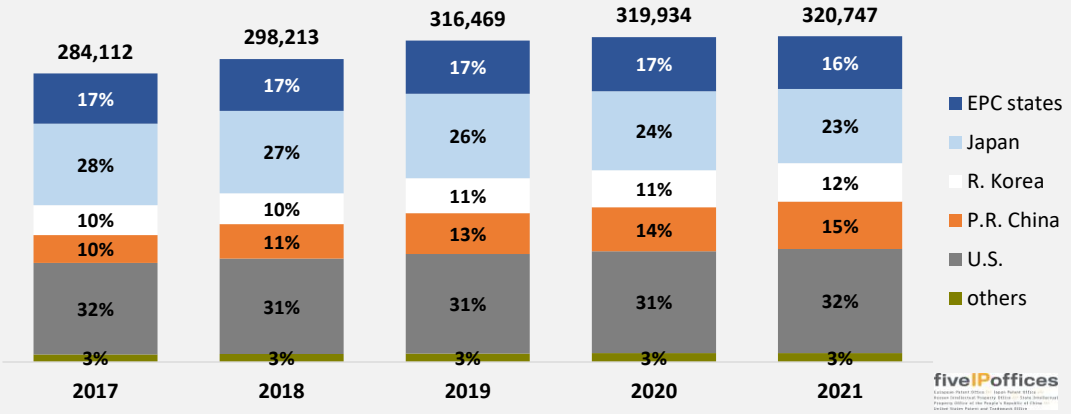
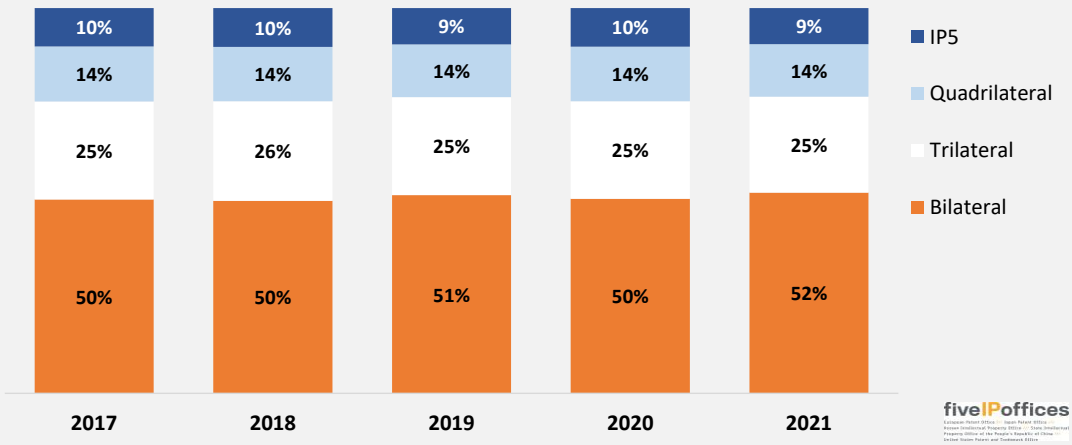


Figure 2.3 is based on published applications data allowing to track subsequent applications in other jurisdictions. As a consequence, data beyond 2021 are not yet complete.

The number of cross filings among the IP5 Offices increased less than 1 percent in 2021 (1 percent in 2020). Cross filings originating from P.R. China, R. Korea and the U.S. increased 8 percent, 4 percent and 2 percent, respectively, in 2021. At the same time, cross filings originating from the EPC States and Japan decreased by 3 percent, 6 percent respectively.

Cross filings may be applications filed at 2 (*Bilateral*), 3 (*Trilateral*), 4 (*Quadrilateral*) or all 5 IP5 Offices (*IP5*). Fig 2.4 below shows the distribution of the cross filings according to the number of IP5 Offices involved.

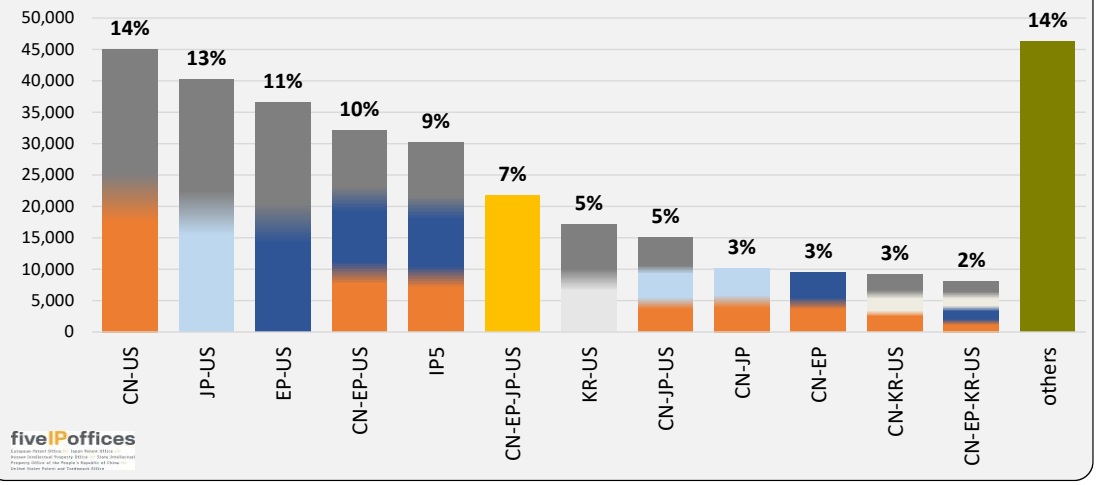
Fig. 2.4: IP5 CROSS FILINGS - OFFICES INVOLVED



In 2021, the share of bilateral filings increased and the share of IP5 cross filings decreased, while those of quadrilateral and trilateral stayed about the same.

Figure 2.5 shows the distribution of the cross filings among the most frequent combinations. In 2021, 12 of the 26 combinations accounted for 86 percent of all cross filings. The leading four combinations, P.R. China-US (CN-US 14 percent), Japan-US (JP-US 13 percent), EPO-U.S. (EP-US 11 percent) and EPC States-P.R. China-US (EP-CN-US 10 percent), accounted for 48 percent of all cross filings in 2021 (48 percent in 2020).

Fig. 2.5: CROSS FILINGS 2021 - MOST FREQUENT OFFICES COMBINATIONS



EUROPEAN PATENT OFFICE

The EPO's mission is to deliver high-quality patents and efficient services that foster innovation, competitiveness and economic growth. Its main task is to grant European patents according to the EPC. Under the PCT, the EPO also acts as an RO, as well as a searching and examining authority. A further task is to perform, on behalf of the patent offices of several member states (in 2023: Albania, Austria, Belgium, Croatia, Cyprus, France, Greece, Italy, Latvia, Lithuania, Luxembourg, Malta, Monaco, the Netherlands, San Marino, Slovenia and the United Kingdom), state-of-the-art searches for the purpose of national procedures. The EPO also plays a major role in the patent information area, by developing analytics tools and hosting the world's largest databases of patent literature.

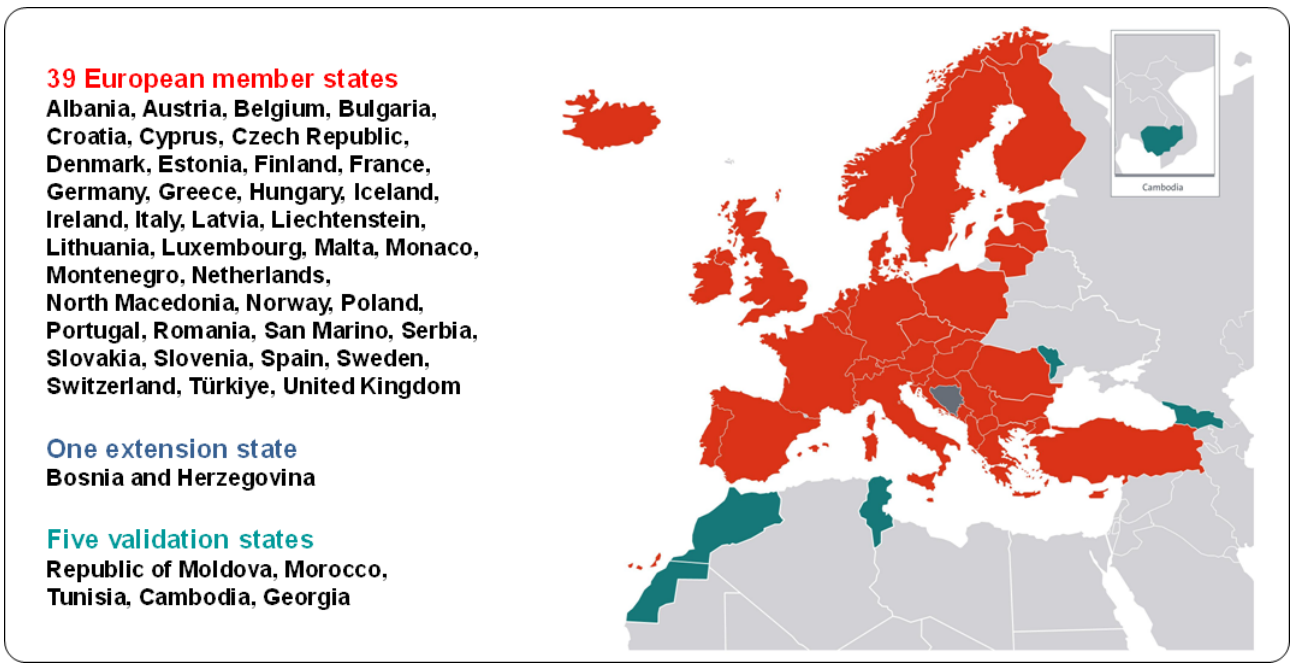
Member states

The EPO is the central patent granting authority for Europe, providing patent protection in up to 45 countries based on a single patent application and a centralised grant procedure (see Figure 2.6).

At the end of 2023, the 39 members of the EPO were:

Albania	Austria	Belgium	Bulgaria	Croatia
Cyprus	Czech Republic	Denmark	Estonia	Finland
France	Germany	Greece	Hungary	Iceland
Ireland	Italy	Latvia	Liechtenstein	Lithuania
Luxembourg	Malta	North Macedonia	Monaco	Montenegro
Netherlands	Norway	Poland	Portugal	Romania
San Marino	Serbia	Slovakia	Slovenia	Spain
Sweden	Switzerland	Türkiye	United Kingdom	

Fig.2.6: EPC MEMBER, EXTENSION AND VALIDATION STATES



Status January 2024

The national patent offices of all the above states also grant patents. After it has been granted by the EPO, a European patent becomes a bundle of national patents to be validated in the states that were designated at grant. The 45 countries for which European patents provide protection represent a population of over 700 million people.

Highlights of 2023

(A comprehensive review is available with the EPO Annual Review 2023)

2023 was an historic year for the EPO. As we celebrated the successes of the past, we also looked forward to an exciting future for invention and patent protection in Europe. The achievements of this year – built on our talent, dedication to quality and a commitment to sustainability – will shape the Office for many years to come.

During 2023, we marked the 50th anniversary of the European Patent Convention (EPC) and witnessed the long-anticipated launch of the Unitary Patent and Unified Patent Court (UPC). We introduced the Observatory on Patents and Technology and launched a new EPO website. Moreover, as we neared the end of the Strategic Plan 2023 (SP2023), we began the transition to the next strategic plan: SP2028. Its strategic priorities are an evolution of those which defined SP2023, all working towards the overarching goal of sustainability. This will be underpinned by five drivers: people, technologies, quality products and services, partnerships, and financial sustainability.

Demand for patents grew markedly further in 2023. The EPO received about 199,275 European patent applications last year, which was 2.9 percent above the 2022 figure.

Mean search timeliness was 5 months (standard cases) and 92.3 percent of the searches (standard cases) were timely delivered. The mean time for issuing the intention to grant was 24.9 months from the valid examination request (standard cases), while 77.2 percent of intentions to grant were issued within 36 months (standard cases). The overall time to grant for first filings (standard cases) was 44.1 months on average, from filing to the intention to grant.

Our aim remains to modernise and simplify our IT systems. In 2023, the EPO finalised SP2023 deliveries and intensified our business change efforts in preparation for the decommissioning of several legacy tools. At the same time, we reflected on our digital transformation journey and identified lessons for the future. By the end of 2023, we had successfully digitalised 99.5 percent of patent grant actions.

New features (such as AI suggestions for file allocation and redistribution) were implemented, including an extension to the opposition procedure. The implementation of AI support has reduced the need for manual support in re-routing files by 75 percent, resulting in improved quality and timeliness. For the remaining cases that still require manual intervention, files are re-routed and the tool is continuously refined to increase its accuracy.

An essential part of our efforts to improve quality and efficiency is our ability to master the wealth of prior art published in many languages. We have extended our in-house machine translation service to new language pairs, providing examiners with access to 99 percent of high-quality translated patent data in our databases. The number of combinations of two languages used in the translation process (so-called language pairs) available to EPO examiners increased from 32 in 2019 to 56 in 2023.

Digital transformation is a journey that begins and ends with our users. With this in mind, we have focused on enhancing the ways in which we interact with our users

throughout their customer journey. As a fundamental part of our approach to developing our external tools, we work closely with our users to test major new features of MyEPO Portfolio during the pilot phase. In 2023, we successfully completed two pilot trials and released new features to all users. Among the most notable new functionalities is the Shared Area which supports a more collaborative and non-sequential examination process, by allowing the examining division and the applicant to work together in real time and at an early stage in the examination process. This early alignment and common understanding between the division and the applicant will ultimately lead to better quality.

The adoption of MyEPO Portfolio by our users is rapidly increasing, and many are now benefiting from the convenience of accessing their digital communications through the user-friendly EPO Mailbox. In March, we reached a new milestone with the partial discontinuation of fax usage. While we will continue to accept incoming faxes from users until mid-2024, we no longer send them as part of the patent granting process. By phasing out obsolete communication channels we are continuing to modernise access to our services, simplifying user communication and supporting a fully digital and paperless PGP.

In 2023, we launched our new external website, featuring an improved search experience, informative sections for inventors and SMEs, a Transparency Portal, and a "New to patents" page, which explains the fundamentals of intellectual property protection to non-patent experts. The new EPO website has been optimised for all devices and designed to meet the evolving needs of our users in the digital age. In line with ambitions outlined in SP2023, we continued moving towards cloud and cloudnative technologies and away from legacy technologies to simplify and modernise our IT landscape. As part of this transformation, our revamped external website epo.org and New Espacenet, which provides access to the world's largest free collection of patent documents, have been successfully migrated to the cloud, ensuring better performance and availability.

We also continued our efforts to improve the availability and stability of our IT systems, recognising the direct impact any failure can have on our activities and our ability to provide high-quality services to users. At the end of the year, we reached our target of 98 percent availability of our IT systems (internal and external). The EPO completed a long-term project to deliver comprehensive disaster recovery capability, allowing us to switch operations from our primary data centre in Luxembourg to our backup data centre in Munich. Our EPO Cloud Policy was updated to incorporate the latest technical, legal, contractual and sustainability requirements, reflecting our experience in using cloud services. As part of the digital transformation, we are increasingly using cost-effective, high-performing and secure cloud services to support our goals.

The EPO has the world's most extensive prior art collection. With an increase from 146 million to 153 million patent publications between 2022 and 2023, the collection now comprises 86 million patent families. This includes 60 million patent families containing 76 million publications of Asian origin (from P.R. China, Japan and R. Korea). An accurate classification of this massive volume of prior art is essential to provide high-quality searches. AI plays an essential role to help us manage these very large numbers: the EPO enhances the Cooperative Patent Classification (CPC) symbols provided by other Offices for their publications with our internal AI classification systems. The high accuracy of the latter ensures that classification quality is according to our internal standards including consistency, while saving resources. The completeness of the EPO's search reports also relies on access to non-patent literature, such as articles in scientific journals. The volume of non-patent literature varies by technology and is a fundamental pillar of search quality: for example, in 2023,

non-patent literature made the highest contribution to total citations in the area of pure and applied organic chemistry. This is why the EPO has continued to expand our non-patent literature database: it now comprises more than 126 million groups, compared to 95 million in 2019.

To secure long-term sustainability, the EPO has made significant strides in enhancing environmental sustainability. Overall paper consumption was reduced by 88 percent during SP2023, driven mainly by the impact of digitalisation and the adapted working environment in the New Ways of Working. At the end of 2023 daily paper consumption per person was 12 sheets compared to a target of 15. Our commitment to reducing our environmental footprint is also shown by the efforts in reducing energy consumption. The introduction of emergency measures to save energy, the implementation of planned improvements in the buildings and the reduced occupancy rates contributed to lowering the energy consumption by 24.4 percent at the end of 2023 compared to the end of 2021. Despite a slight increase in carbon emissions in 2023, which was due to cooling agent losses caused by ageing infrastructures, the carbon emissions KPI indicates an overall reduction of over 41 percent in CO2 equivalent emissions since 2020.

Unitary Patent

The Unitary Patent (UP) entered into force on June 1, 2023, and the Unified Patent Court (UPC) opened on the same date. A patent with unitary effect may be requested for any European patent (EP) granted since this date. This makes the procedure simpler and provides a cost-effective option for securing wider patent protection.

By the end of 2023, the Office had received over 17,000 requests for unitary effect of a European patent. In the period from June to December, over 22 percent of European applications turned into a Unitary Patent, greatly exceeding the expected uptake rate of 17 percent. To ensure full transparency on the performance of the new system, the EPO launched the Unitary Patent Dashboard, which contains detailed information by technology field and geographic origin as well as a list of the top 25 adopters, most of them European. In fact, approximately around two-thirds of Unitary Patents are owned by users from Europe, including from EPC contracting states which are not part of the Unitary Patent system. And 34 percent of those European users are SMEs or individual inventors – a much higher proportion than for European patent applications.

For more details, readers are referred to the area of the EPO website dedicated to Unitary Patent & Unified Patent Court

EPO Production information

Activities associated with searches, examinations, oppositions, appeals and classifications are all performed by EPO staff. The EPO does not outsource any of its core activities. The decision to grant or refuse a patent is taken by a division of three examiners. In Table 2.1, production figures for filings, applications, searches, examinations, oppositions and appeals in the European procedure are given for the years 2022 and 2023.

Table 2.1: EPO PRODUCTION INFORMATION

EPO PRODUCTION FIGURES	2022	2023	Change	%Change
Patent applications (Euro-direct & Euro-PCT regional phase)	**193,627**	**199,275**	**+ 5,648**	**+ 2.9%**
Searches carried out				
European (including PCT supplementary)	132,384	118,458	- 13,926	- 10.5%
PCT international	86,036	87,715	+ 1,679	+ 1.9%
On behalf of national offices	29,128	27,161	- 1,967	- 6.8%
Total production search	**247,548**	**233,334**	**- 14,214**	**- 5.7%**
Examination-Opposition (final actions)				
European	106,277	137,532	+ 31,225	+ 29.4%
PCT Chapter II	5,359	5,016	- 343	- 6.4%
Oppositions	3,775	2,889	- 886	- 23.5%
Total final actions examination-opposition	**115,361**	**145,437**	**+ 30,026**	**+ 26.0%**
European granted patents	**81,754**	**104,609**	**+ 22,855**	**+ 28.0%**

Patent knowledge / Patent intelligence

The EPO's Patent Index 2023 provides a comprehensive overview of the figures representing recent activity in the global patent system and insights into emerging technology trends. Users wishing to explore the statistics behind the Patent Index, customise their own graphs and download selected data, can do so by visiting the EPO's online Statistics & Trends Centre.

Aiming to provide high-quality training and education on intellectual property to EPOrg countries and beyond, the European Patent Academy offers training in three main areas: patent granting, technology transfer, and patent litigation. Relying on the pillars of digitalisation, modularity, co-operation and certification, most training is done online and free of charge, thus fostering accessibility to education and the democratisation of knowledge on patents.

2023 marked the introduction of the MIPEF designed to be integrated into university curricula. The learning offer in the area of EQE and EPAC certifications and exams was consolidated, with courses to support candidates to these exams. The Academy also supported the deployment of the Unitary Patent with new training offer, including the new Litigation Matters conference, and strong partnerships with the main players in the field, including the UPC, IJA, EPLAW and EPLIT. Last but not least, in 2023 the EPO launched several initiatives aimed at fostering the values of innovation and entrepreneurship among younger audiences, combining learning modules and science fairs.

In 2023, the live online training activities offered by the Academy reached 26,480 participants. This is a 20 percent increase compared to 2022, surpassing the previous

record for the third year in a row. Efforts in international co-operation, especially with validation states and reinforced partnership countries, have resulted in a growth of new users among non-member states, confirming a growing global interest in the European patent system and, more broadly, in the EPO learning offer.

As of January 2024, the PATLIB network includes 320 information centres in 37 countries offering advice and services on IP, patent information and technology transfer to local industries, SMEs, researchers and individual innovators. The EPO supports the PATLIB centres by providing training, funding, certification and networking events such as the PATLIB annual conference. By the end of 2023, 26 African countries and 64 universities had joined the Knowledge Transfer to Africa (KT2A) programme, which aims to strengthen technology transfer capacity in the continent by promoting co-operation between the PATLIB network and African universities.

Central to the patent knowledge strategy are simplifying and digitalising our portfolio, democratising access to our data and maximising our impact. The EPO patent collection accessible through Espacenet continued its upward trend, reaching over 150 million patent documents and 445 million legal events in 2023.

The EPO published a series of patent insight reports on state-of-the-art technological fields such as quantum computing, quantum simulation, mRNA technologies and offshore wind energy in 2023. All the patent insight reports have garnered over 24,000 downloads, underscoring the high demand for and relevance of our insights. In addition, specialised Espacenet-based platforms dedicated to specific technologies have been launched, including firefighting technologies and an extension of the clean energy technologies platform, with a particular focus on carbon capture and storage technologies. These platforms attracted over 14,000 page views, reflecting a growing interest in sustainable and life-saving technologies. In its commitment to sustainable patent intelligence, the EPO ceased the distribution and sale of all physical books and papers, a significant pivot given we had sold over 5.3 million books since 2002. Moreover, the yearly service fee to the data platform has been removed, lowering the barrier to entry and facilitating broader access to valuable data. The Patent Knowledge Week event set a record with nearly 5,000 online viewers from 92 countries, highlighting advancements in AI, the Unitary Patent and data analytics.

International and European Cooperation

The EPO is committed to strengthening our network of partners supporting the European patent system. SP2023 brought a notable expansion in geographical outreach, reflecting both the broader geographical coverage of the European patent system and the increased utilisation of EPO work products (search and examination) by non-member states. Since June 2019, the number of reinforced partnerships has grown from two to 13 and the population coverage from 0.87 billion to 2.16 billion, resulting in an increase in the size of the market for European patents by almost 150 percent.

Since its inception, the EPO has been steadfast in its commitment to serving users of the European patent system. The EPO is a central pillar in fostering innovation and protecting intellectual property within Europe, holding the unique authority to grant patents valid across 39 member states, one extension state and, as of January 15, 2024, five validation states. This mission has been significantly bolstered by collaboration within the European Patent Network (EPN), which has played a pivotal role in achieving milestones, especially in the transformative year of 2023.

Central to the EPO's mission is its collaboration with its member states and extension state to enhance patent products and services. The Office has concluded 39 bilateral co-operation agreements, which provide a solid foundation for collaboration. These agreements were extended until June 2024 to ensure a smooth transition between strategic plans. New agreements aligning with the objectives of SP2028 will be drafted in collaboration with the member states, enhancing the combined effect of joint activities and initiatives. Under the work sharing pillar of the EPO's co-operation policy, 2023 saw the working agreement on search co-operation with Austria come into force and the signature of a new agreement with Slovenia – taking to 17 the number of contracting states participating in this programme. Collective initiatives aimed at promoting the Unitary Patent system included supporting nine IP outreach events carried out in co-operation with contracting states and translating promotional materials into national languages.

Beyond Europe, the EPO pursued an extensive co-operation agenda in 2023, aiming to extend the reach and effectiveness of the European patent system for its users. Validation agreements were a significant focus throughout the year. Preparatory work concluded for the entry into force of the agreement with Georgia while the groundwork was laid for agreements with several countries, including Costa Rica, the Lao PDR and Ethiopia. These agreements aim to enhance accessibility to the global patent system and support innovation in those regions. Reinforced partnerships were also forged with Chile and Ukraine, alongside a work plan with the Saudi IP Office as part of an ongoing Reinforced Partnership initiative, fostering collaboration and knowledge exchange. Technical co-operation initiatives, such as bilateral agreements with the USPTO and IP Australia, and renewed in-person examiner exchanges with the JPO, aimed to enhance access to patent information and improve patent quality.

The EPO participated in multilateral co-operation efforts within the IP5 group, focusing on addressing global challenges such as climate change through sustainable innovation, and harnessing the latest technologies to enhance co-operation, including through the blockchain-based IP5 Global Assignment project. The 2023 Trilateral Conference, hosted by the EPO, aimed to devise collaborative strategies to fulfil the UN SDG 4: "Ensure inclusive and equitable quality of education". Discussions in this session emphasised the importance of education to inform and nurture intellectual property among young people. March 2023 marked the 10th anniversary of the CPC, with events involving both participating offices and industry associations. A noteworthy development was the launch of an AI powered classification predictor tool. Under the PCT, the EPO collaborated with WIPO to improve international patent systems and support users. Efforts include enhancing patent filing tools such as ePCT integration into the Front Office platform, streamlining application processes for member states. Additionally, amendments proposed by the PCT Minimum Documentation Task Force, led by the EPO and USPTO, were adopted, aiming to enhance the legal framework for PCT documentation by 2026.

Societal impact

The EPO aims to have a positive impact on society through all its high-quality activities, products and services. Every day, by tackling global challenges, innovators contribute to a safer, smarter, more sustainable world. The EPO works with inventors, investors, policymakers, scientists and other stakeholders to share patent knowledge worldwide, making it easier for innovators everywhere to develop solutions to these global challenges.

The launch of the Observatory on Patents and Technology on October 6, 2023 has provided a platform for anyone interested in the future of innovation. The Observatory quantifies and explores trends and challenges throughout the innovation ecosystem, offering reliable evidence for informed decision-making by industry, innovators, investors, policymakers and many other stakeholders. Serving as a globally accessible digital platform, which facilitates transparent and open discussions on innovation, it provides valuable insights into technology trends that will shape the lives of current and future generations. From the launch of new digital tools and continuous analysis of the latest technology trends to in-depth studies and online seminars, all activities of the Observatory contribute to the UN SDGs.

The activities of the Observatory are structured around three streams. The first stream, Technology intelligence, comprises activities mapping the latest technology trends and innovative solutions. The second stream, Legal and innovation policy, uses economic tools to analyse patent law and patent intelligence, and addresses current hot topics in the patenting landscape. The third stream, Diversity and transformation, aims to open up the patent world for non-specialists, as well as to achieve greater inclusion of underrepresented actors in the innovation ecosystem.

Economic studies

To demonstrate the value of patent information and the importance of IP rights, the EPO's Chief Economist Unit published several studies in 2023, exploring the economic impact of patents and the role of women inventors.

The first study published in 2023 is a joint study with the International Energy Association (IEA), uses global patent data to provide a comprehensive, up-to-date analysis of innovation in hydrogen technologies. It is the first study of its kind and covers the full range of technologies, from hydrogen supply to storage, distribution and transformation, as well as end-use applications. It shows that innovation in hydrogen is shifting towards low-emission solutions, with Europe and Japan in the lead.

The second study published by the EPO in 2023 offers a timely update on the ever-evolving innovation trends in additive manufacturing technologies. It provides a comprehensive picture of recent developments and of the key players shaping this transformative field. Patent data shows disruptive additive manufacturing technology is impacting many sectors, especially health, medical and transportation.

The third study, which is a joint publication with the European Union Intellectual Property Office (EUIPO), focuses on how innovative startups obtain financing to develop their ideas into new products for the marketplace. It provides evidence that startups increasingly make use of IP rights, and that the filing of patent and trade mark applications in the seed or early growth stage is associated with a higher likelihood of subsequent venture capital funding. It also analyses how IP rights can help the providers of initial financing to exit successfully by selling to another company or going public with a stock market flotation.

All of these studies can be consulted online on the EPO website.

EPO budget

The EPO is a self-financed organisation with a yearly budget of about EUR 2.7B for 2023.

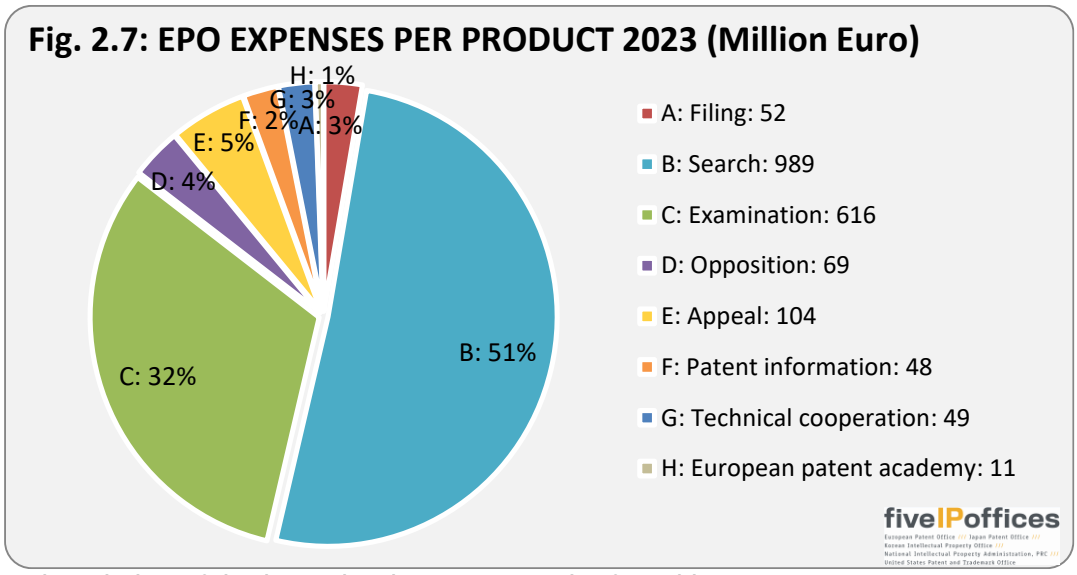
Revenues are mainly generated from patent and procedural fees comprising
- fees for patent-granting, opposition and appeal procedures
- fees for searches and preliminary examinations on international applications
- national renewal fees for granted European patents[11]
- fees for searches for national offices and third parties

The EPO foresees biannual inflation-based fee adjustment.

The EPO is financing all operational and capital expenditures without subsidies from its member states. A large part of the budget is foreseen for direct staff expenditures (salaries, allowances, etc.), the running cost of the EPO's own social security schemes, IT and building cost as well as for cooperation with member states. Any budget surplus is transferred to the one of the EPO's investment entities to support long-term sustainability.

The EPO`s budget is available in full on our website.

Figure 2.7 shows EPO expenses[12], based on the International Finance Reporting Standards (IFRS) per product in 2023.



A description of the items in Figure 2.7 can be found in Annex 1.

[11] After a European patent has been granted, renewal fees for subsequent years during its term are payable to the designated Contracting States. Each Contracting State pays to the EPO, for each European patent maintained in that state, a proportion of its national renewal fee fixed by the Administrative Council (50 percent since 1984).
[12] The EPO uses the word "expenses" in accordance with the IFRS reporting approach.

EPO Staff

At the end of 2023, the EPO's staff totalled 6,275 employees (-0.4 percent) from 35 different European countries[13], 35 percent of the employees and 28 percent of the managers were women. Total staff includes 3,987 examiners working in search, examination and opposition and 180 Boards of Appeal members.

In 2023, 211 staff were recruited externally, of which 96 examiners.

After their recruitment, all new examiners complete a three-year training program and are tutored by more experienced colleagues. All staff at the EPO work in its three official languages: English, German, and French.

More information

Further information can be found on the EPO’s Homepage.
www.epo.org

[13] For more details, see the 2023 EPO social report

JAPAN PATENT OFFICE

Highlights of 2023

1) Examination Performance

The JPO has been aiming to achieve the "world's fastest and utmost quality patent examinations". To this end, the JPO has been implementing various measures focused on "maintaining speed", "granting high quality rights", and "cooperating and collaborating with foreign IP offices".

The acceleration of the IP creation cycle, comprised of IP creation, establishment of rights, and utilization of rights, requires shortening total pendency. Accordingly, the JPO has been engaging in initiatives to speed up examinations. In 2023, First Action Pendency[14] and Total Pendency for Patent Examinations[15] were 9.5 months and 14.0 months on average.

2) Accelerated Examination System[16]

Under certain conditions, the JPO offers accelerated examinations and super-accelerated examinations that, upon the request of an applicant, expedite the commencement of an examination. The accelerated examination system for patent applications may be applied for applications that are also filed in one or more other countries and applications by small and medium-sized enterprises, etc. In 2023, first action pendency from request for accelerated examination was 2.2 months on average.

The JPO is running pilot programs for a super-accelerated examination system for applications of higher importance including the applications for inventions that have already been put into practice and are filed in one or more other countries. First action is issued within one month from the request, in principle (within two months, in principle, in the case of DO (Designated Office) applications).

In 2023, there were 1,224 requests, and first action pendency from request for super-accelerated examination was 0.8 months on average (1.3 months for DO applications).

3) Deliberation on Revising the Examination Handbook

Advances in AI-related technologies and a rising number of applications have left room for expounding on the case examples of AI-related technologies, such as adding categories that were not covered by existing case examples. In addition, the Intellectual Property Strategic Program 2023 sets forth the following short-term goal: "Enhance and disclose a wider range of AI-related invention examination case examples in light of the increasing potential for the broader utilization of AI in the creative process across various fields". To this end, on March 13, 2024, the JPO has added ten more cases pertinent to AI-related technologies in the Examination Handbook.

[14] The first action pendency is the period from the date of examination request until the JPO sends the first notice of examination results to the applicant, etc. (for the most part, either a notice of patent grant or a notice of reasons for refusal).

[15] The total pendency (also called the ″standard pendency″) is the period from the date of examination request to withdrawal or abandonment or until a final disposition (excluding cases where the JPO requests an applicant to respond to the second notice of reasons for refusal due to the amendments submitted by the applicant, and where the applicant performs procedures they are allowed to use, such as requests to the JPO for extension of the period of response and for an accelerated examination).

[16] https://www.jpo.go.jp/e/system/patent/shinsa/jp-soki/index.html

4) Green Transformation Technologies Inventory (GXTI)

Many countries, including Japan, have set ambitious goals to achieve carbon neutrality by 2050 in order to address the issue of climate change. To achieve this goal, it is essential to promote innovation related to climate change technologies, as well as to accelerate green transformation (GX). The patent system can help promote GX by incentivizing inventors and companies with effective patent protection, and by providing access to patent information on matters including trends in climate change technologies.

In an effort to support the understanding of trends in patent applications for GX-related technologies and also foster green innovation, the JPO published the GXTI [17] in June 2022, which classifies technologies that are expected to have an effect on greenhouse gas reduction. The GXTI provides the patent search formulae prepared by the JPO's patent examiners, which consist of IPC or a combination of IPCs and keywords, for the purpose of analyzing global patent trends that correspond to individual technological categories.

Patent information analysis using the GXTI enables the following:

- Companies can illustrate the strengths and weaknesses of their GX-related technologies, and formulate their research and development R&D strategy accordingly
- Companies can objectively explain to investors the superiority of their R&D capabilities with respect to GX-related technologies
- Governments can foster GX initiatives on an evidence-driven basis

The GXTI is utilized as a common measure for patent information analysis in the fields of GX-related technologies. In addition, the JPO conducted a survey in 2022 using the GXTI to analyze patent filing trends based on individual GXTI categories. The final report was published in May 2023, and is available on the JPO's website in both Japanese[18] and English[19].

5) Dissemination of information on the JPO's measures to overseas users

The JPO disseminates information to overseas users regarding matters such as the JPO's measures that are available to overseas users and latest statistics. Through such dissemination of information, the JPO supports overseas users in filing applications with the JPO and smoothly obtaining rights in Japan, and it promotes their understanding of the JPO's activities.

- In 2023, "The JPO Quick Reads"[20] was published 45 times, through which the JPO disseminated information focusing on measures available to foreign users, such as the results of patent information analysis based on the GXTI, the JPO's attachés in various countries, the JPO's international cooperation that contributes to global registration of rights, and reports on international meetings.

[17] https://www.jpo.go.jp/e/resources/statistics/gxti.html
[18] https://www.jpo.go.jp/resources/statistics/gxti/tokkyo-joho-bunseki_houkokusho-youyaku.pdf
[19] https://www.jpo.go.jp/e/resources/statistics/gxti/report-results_patent-analysis.pdf
[20] www.jpo.go.jp/e/news/quickreads/index.html

- The JPO enhanced the content provided on “The JPO Key Features“.[21] It contains information on a range of measures related to patent, design, trademark, and trial and appeal.
- The JPO enhanced the content of materials that introduce the JPO’s measures to overseas users and published the materials on its website.[22]
- The JPO website[23] published three more successful cases of foreign companies which are conducting business by acquiring patent rights in Japan. Now nine cases are listed (U.S., Europe, Asia), and the technology fields expanded to include healthcare, AI solution, robotics, and electronics. The JPO raised awareness about the cases at events attended by overseas users.
- In 2023, the JPO exchanged opinions with 32 foreign companies, aimed at deepening their understanding of Japan’s IP rights systems and examination practices and grasping what foreign companies demand of the JPO. Companies that wished to exchange opinions with the JPO were invited to apply on its website[24].
- The JPO reached a broad range of overseas users also through its English-language official X (formerly Twitter) account[25] and official LinkedIn account[26].
- The JPO provided updates of its measures to overseas users at international symposiums and seminars.

[21] www.jpo.go.jp/e/news/keyfeatures/index.html
[22] www.jpo.go.jp/e/resources/report/sonota-info/presentation-material.html
[23] https://www.jpo.go.jp/e/news/kokusai/successful-cases/index.html
[24] https://www.jpo.go.jp/e/support/general/opinion-exchange.html
[25] https://twitter.com/JPO_JPN/
[26] https://jp.linkedin.com/company/japan-patent-office

JPO Production information

Table 2.2 shows production figures for applications, examinations, grants, appeals or trials and PCT activities in the Japanese procedure in 2022 and 2023.

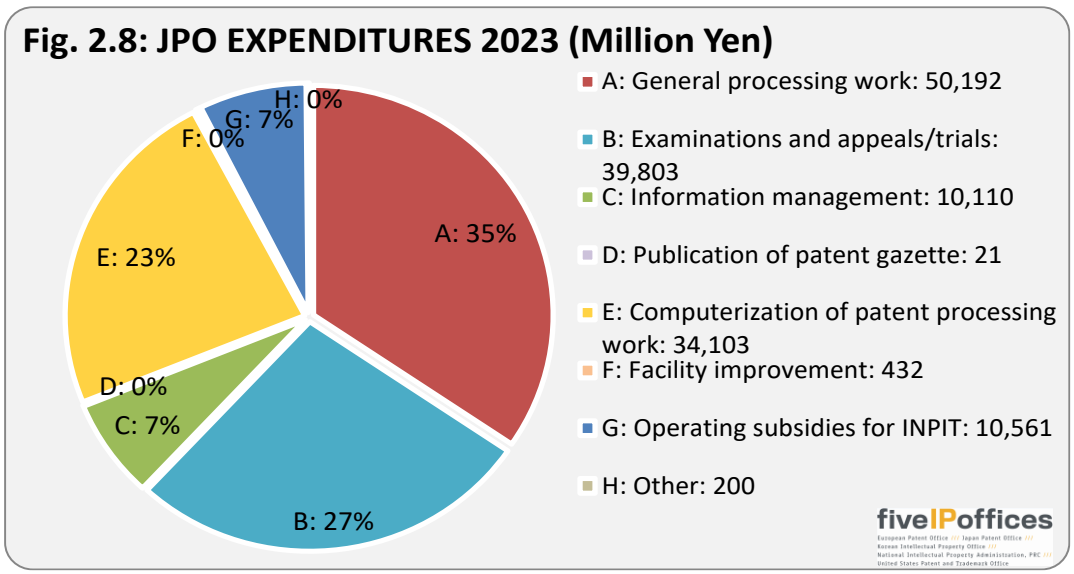
Table 2.2: JPO PRODUCTION INFORMATION

JPO PRODUCTION FIGURES	2022	2023	Change	%Change
Applications filed (by Origin of Application)				
Domestic	218,813	228,936	+ 10,123	+ 4.6%
Foreign	70,717	71,197	+ 480	+ 0.7%
Total	**289,530**	**300,133**	**+ 10,603**	**+ 3.7%**
Applications filed (by Type of Application)				
Divisional[27]	33,528	37,279	+ 3,751	+ 11.2%
Converted[28]	47	46	-1	- 2.1%
Regular	255,955	262,808	+ 6,853	+ 2.7%
Total	**289,530**	**300,133**	**+ 10,603**	**+ 3.7%**
Examination				
Requests	233,780	230,184	- 3,596	- 1.5%
First Actions	242,626	247,155	+ 4,529	+ 1.9%
Final Actions	247,378	254,766	+ 7,388	+ 3.0%
Grants				
Domestic	155,117	158,587	+ 3,470	+ 2.2%
Foreign	46,303	50,781	+ 4,478	+ 9.7%
Total	**201,420**	**209,368**	**+ 7,948**	**+ 3.9%**
Appeals/Trials				
Demand for Appeal against refusal	19,647	21,047	+ 1,400	+ 7.1%
Demand for Trial for invalidation	97	84	- 13	- 13.4%
PCT Activities				
International searches	49,154	47,333	- 1,821	- 3.7%
International preliminary examinations	1,401	1,412	+ 11	+ 0.8%

[27] Divisional application(s) is/are one or more new patent application(s) which is/are filed by dividing a part of the patent application that includes two or more inventions under certain conditions.
[28] Converted applications include patent applications which are converted from an application for utility model registration or design registration (under Article 46 of Patent Act), and patent applications filed based on a registration of utility model (under Article 46bis).

JPO budget

Figure 2.8 shows JPO expenditures by category in 2023.



A description of the items in Figure 2.8 can be found in Annex 1.

JPO Staff Composition

As of the end of fiscal year (FY) 2023, the total number of staff at the JPO was 2,796.

Examiners	
Patent / Utility model	1,663
Design	50
Trademark	175
Appeal examiners	380
General staff	528
Total	2,796

More information

Further information can be found on the JPO's Homepage:
www.jpo.go.jp/e/

KOREAN INTELLECTUAL PROPERTY OFFICE

Overview

As the Korean governmental agency primarily responsible for overseeing IP rights (IPRs), the KIPO strives to conduct its IP administration in accordance with the national paradigm of creative economy, which seeks to foster innovation and new engines of economic growth to drive Korea's future prosperity.

Domestically, KIPO has put as great an emphasis as possible on further developing its examination services, as well as promoting economic sustainability through a virtuous cycle of IP creation, utilization, and protection. On the international front, KIPO strengthened our cooperative ties with foreign IP offices and other international organizations.

Premium Examination Services
KIPO continually aims to provide high-quality, customer-oriented, and fast examination services by raising the quality of IP administration, improving examination systems, and reducing first office action pendency. In 2023, the average first office action pendency was 16.1 months for patents and utility models, 13.1 months for trademarks, and 4.0 months for industrial designs

IPR Applications
In 2023, we received a preliminary total of 556,600 applications for patents, utility models, industrial designs, and trademarks. Out of that number, 85,884 applications were filed by non-residents.

PCT Applications
The number of PCT applications to KIPO has continually grown every year. We have the 5th largest amount of PCT applications by receiving offices. There were 22,166 PCT applications in total for 2023 which is a 1.1 percent increase from 21,916 applications in 2022. The Korean language is also the 4th most commonly used language as an official PCT publication language.

Improving the IP System

1. Improvement of Examiner-Applicant Communication for IP Examination

KIPO places great value on enhancing the convenience of its services for IP users. Therefore, in response to the increasing demand for user-friendly services, IT technologies are being utilized to upgrade KIPO customer services, particularly to improve ease of contact and communication between examiners and applicants regarding the examination process. In this regard, KIPO has introduced an "Online Examination Response Reservation System" and improved "Chatbot" consultation features which will allow high quality correspondence with focus on the convenience of its users.

2. Enhancement of the Patent Trial System with AI and IT Technology

To equip itself with a trial system suitable for the digital era, KIPO implemented a three-year plan (2023 to 2025) for building a highly advanced and efficient IT system that employs artificial intelligence (AI), automation, and other new digital technologies for the formality examination and trial sectors. In 2023, focus was put on improving public

services and trial procedures. KIPO's Intellectual Property Trial and Appeal Board (IPTAB) launched a "Digital Patent Trial System" by incorporating AI and IT technologies to simplify the process of filing patent trials online and introducing AI into patent trial administration. New features have been made available on the respective electronic systems for filing and submitting online forms for trials or appeals. Both petitioners and IPTAB's formality examiners will be able to complete their tasks more quickly and efficiently.

Promoting the Creation and Use of IP

1. Public Release of Pharmaceutical Experimental Dataset

KIPO operates a data platform called the Korea Intellectual Property Rights Information Service Plus (also known as "KIPRISPlus") which provides information on domestic and international IP rights publications and IP administration of 13 countries. In February 2023, through KIPRISPLUS (plus.kipris.or.kr), KIPO released about 450,000 records of pharmaceutical experimental data to be freely available to the public.

The released information includes data related to pharmaceutical experiments as well as reference dataset that allows AI to extract experimental data included in the Patent Gazette. KIPRISPlus also provided 119 types of reference dataset for AI which has been opened for multilingual translation and image search in the format of files or OpenAPI.

In particular, the pharmaceutical experimental data is a database of basic information derived from processing and analyzing images of tables included in the Patent Gazette, such as active ingredient names, test methods, and test values. The dataset contains information from image classification by categorizing data from various images, table structures (rows × columns) by accurately extracting table data, and experimental data identification by automatically identifying names of ingredients, test values, etc.

With the released pharmaceutical experimental data, textual data can be extracted from image-based data on patent documents and research papers which can then be analyzed. Based on this, IP service providers will be able to develop services that extract and utilize experimental data from the Patent Gazette. In turn, related companies and research institutions will be able to use examples and data for their research and development of vaccines, new drugs, etc.

2. Establishment of the Patent Statistics Center

In January 2023, KIPO launched the "Patent Statistics Center" to specialize in collecting, analyzing, and disseminating IP data and statistics by PhD-level experts who are capable of conducting analysis from economic and industrial perspectives.

As a specialized unit established within the Korea Institute of Intellectual Property (KIIP), the Patent Statistics Center aims to provide valuable insight and support for IP stakeholders, including policymakers, researchers, businesses, and innovators. The Center will continuously perform tasks such as analyzing the value and economic impact of IP based on the latest statistics of patents, utility models, trademarks, and designs. Furthermore, the published reports will be utilized to enhance support for national R&D innovation as well as the formulation of economic and industrial security policies and business management strategies.

For example, statistical analysis of patent big data of key industrial sectors (i.e., semiconductors) can help assess technology trends and company competitiveness and identify promising R&D projects. Also, statistical analysis of patents and market trends can help early detection of industries with declining or diminishing competitiveness. And lastly, for import products that highly depend on foreign country support, statistical analysis of the import products and patents can help set direction for technological independence.

Going forward, users such as companies and public institutions will be able to have convenient access to high-quality IP statistical analysis reports through the KIIP website (https://www.kiip.re.kr/index.do).

Enhancing Global IP Cooperation

Improvement of the Patent Prosecution Highway (PPH)

The Patent Prosecution Highway (PPH) is an international cooperation program that leverages the fast-track examination procedures already in place among participating patent offices of different countries. This allows applicants to receive final disposition of a patent application more quickly and efficiently than standard examination processing.

1) PPH Cooperation with the US and Japan

Especially among the IP5 members, discussions had been ongoing to enhance the predictability of each stage of examination for PPH applications. The USPTO and JPO first launched an improvement initiative in 2022. Beginning in August 2023, KIPO joined the USPTO and JPO in implementing an “improvement initiative” in order to support applicants to establish effective IP strategies and enter overseas market through fast acquisition of rights.

Under this initiative, the time to receive the first examination notice for accelerated examination under the PPH framework would be reduced from four to three months and the period between an applicant's response and the next examination notice to be managed within three months. KIPO’s participation in this was decided following the Memorandum of Understanding on Bilateral Cooperation between USPTO and KIPO signed in June
2023.

Now applicants who have applied for the PPH at KIPO, the USPTO and JPO may obtain patents within three months from the grant of a PPH request. As more countries join the initiative, applicants desiring to expand their market would find it easier to predict the timing of PPH examination at each country and manage their IP systematically and enter the global market more strategically.

2) Pilot PPH between the Korea and Indonesia

In December 2023, KIPO began a pilot PPH program with the IP office of Indonesia (Directorate General of IP; DGIP) for prioritized examinations. This PPH program was established following an agreement at the Korea-Indonesia summit and between the heads of the IP offices of the Korea and Indonesia.

Prior to the pilot program, it could take up to 40 months to acquire a patent from the Indonesian Patent Office. Through the PPH, applicants who have received a relatively

earlier patent decision from KIPO (average duration of domestic patent examination is 18.4 months) can expect a significantly reduced time to acquire a patent from DGIP.

With the addition of Indonesia, KIPO has partnered with a total of 38 IP offices (34 countries and 4 international organizations) through bilateral, IP5, and Global PPH (including PCT-PPH) programs.

KIPO Production information

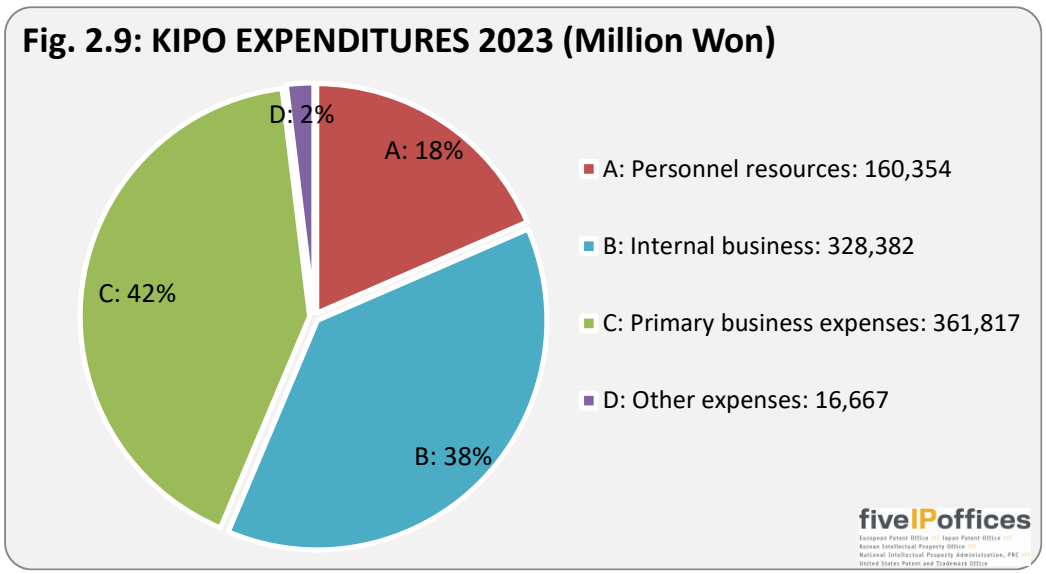
Table 2.3 shows production figures for applications, examinations, grants, appeals or trials and PCT activities for 2022 and 2023.

Table 2.3: KIPO PRODUCTION INFORMATION

KIPO PRODUCTION FIGURES	2022	2023	Change	%Change
Applications filed (by Origin of Application)				
Domestic	183,748	191,142	+ 7,394	+ 4.0%
Foreign	53,885	52,168	- 1,717	- 3.2%
Total	237,633	243,310	+ 5,677	+ 2.4%
Applications filed (by Types of Application)				
Divisional Applications	15,956	15,904	- 52	- 0.3%
Converted Applications	27	20	- 7	- 25.9%
Others	221,650	227,386	+ 5,736	+ 2.6%
Total	237,633	243,310	+ 5,677	+ 2.4%
Examination				
Requests	202,508	199,979	- 2,529	- 1.2%
First Actions	172,793	177,650	+ 4,857	+ 2.8%
Final Actions	172,492	175,536	+ 3,044	+ 1.8%
Grants				
Domestic	99,202	99,315	+ 113	+ 0.1%
Foreign	35,978	35,419	- 559	- 1.6%
Total	135,180	134,734	- 446	- 0.3%
Appeals/Trials				
Demand for Appeal against refusal	1,589	1,700	+ 111	+ 7.0%
Demand for Trial for invalidation	374	336	- 38	- 10.2%
PCT Activities				
International searches	29,928	29,275	-653	-2.2%
International preliminary examinations	96	118	22	22.9%

KIPO budget

Figure 2.9 shows KIPO expenditures by category in 2023



A description of the items in Figure 2.9 can be found in Annex 1.

KIPO Staff Composition

At the end of 2023, the KIPO had a total staff 1,895. The breakdown is as follows.

Examiners	
Patents and Utility Model	980
Designs and Trademarks	213
Appeal examiners	106
Other staff	596
Total	1,895

More information

Further information can be found on KIPO's Homepage:
www.kipo.go.kr/en/MainApp

China National Intellectual Property Administration

The CNIPA is an institution in charge of intellectual property rights directly under the State Council, which conducts examination and authorization, approving and registering, and administratively adjudicating of patent, trademark, geographical indication, and layout-design of integrated circuit, as well as coordinating foreign-related intellectual property affairs.

Office News

The newly amended *Implementing Regulations of the Patent Law* came into force.
The amendments mainly involved five aspects:

- First, the patent application system was further refined to facilitate the applicants and innovative entities to obtain patents.
- Second, the patent examination system was optimized to improve the patent examination quality.
- Third, the administrative protection of patent was strengthened to safeguard the legitimate rights and interests of the patentees.
- Fourth, better patent public services were provided to enhance patent transformation and utilization.
- Fifth, special provisions on international applications for design were added to align with *the Hague Agreement Concerning the International Deposit of Industrial Designs*.

Special Action Plan for Patent Transformation

With the aim of promoting the industrialization of patent, the General Office of the State Council issued the *Special Action Plan for Patent Transformation and Utilization (2023-2025)* on October 17. CNIPA, jointly with relevant departments, formulated the work plan for revitalizing existing patents in universities and research institutions, as well as the initiative for promoting the industrialization of patents to boost the development of small and medium-sized enterprises.

Promote the Development of a Fast-track and Coordinated IP Protection Mechanism

CNIPA approved to establish another 15 IP protection centers and fast-track IPR enforcement centers. As of the end of 2023, there were 70 national IP protection centers and 42 fast-track IPR enforcement centers. With the support of the IP protection centers and the fast-track IPR enforcement centers, CNIPA continued to carry out the pilot program on expedited resolution of IP disputes to reduce the average processing time. In 2023, these centers received more than 121,000 IP dispute cases in total.

Highlights Shown in Figures

As of the end of 2023, the total number of valid invention patent in Chinese mainland reached 4.015 million, exceeding four million for the first time, a year-on-year increase of 22.4 percent. The total number of valid registered trademark is 44.047 million, a year-on-year increase of 8.4 percent.

According to the statistics of 35 fields of technology classified by WIPO, as of the end of 2023, the top three technical fields of China's domestic effective invention patent

growth rate were IT methods for management, computer technology and basic communication processes, with a year-on-year increase of 59.4 percent, 39.3 percent and 30.8 percent, which were much higher than the domestic average.

A joint announcement by the CNIPA and the National Bureau of Statistics (NBS) showed that the added value of China's patent-intensive industries amounted to RMB 15.3 trillion in 2022, accounting for 12.71 percent of GDP, an increase of 0.27 percentage points from the previous year.

Publish *the China Patent Survey Report* for 8 consecutive years. According to the latest data, the commercialization rate of Chinese invention patents will be 39.6 percent, steadily improving for five consecutive years. As the main body of innovation activities, the commercialization rate of invention patents of Chinese enterprises is 51.3 percent, exceeding 50 percent for the first time.

Patent Examination

CNIPA amended *the Guidelines for Patent Examination* and *the Several Provisions on Regulating Patent Application Activities*. CNIPA issued two sets of patent guidelines on the determination of protected objects for utility models and international registration applications for design, and six sets of trademark guidelines on trademark assignment procedures, so as to seek practical solutions to address the concerns of innovative entities. Conducting research and demonstration on key issues of *the Regulations on the Protection of Layout-Designs of Integrated Circuits* and amendments to implementing rules, and the data intellectual property protection system. Promoting research and demonstration on the basic legal system of intellectual property rights.

CNIPA conducted research and argumentation on key issues related to the amendments of the Regulations for the Protection of Layout-Design of Integrated Circuits and the implementing regulations thereof, as well as the protection system of data intellectual property rights. Research and argumentation on the fundamental legal system of intellectual property rights was put on the agenda.

In 2023, the average pendency for the examination of invention patents was reduced to 16.0 months, realizing annual pendency of examination goal. The accuracy rate of invention patent examination and conclusion is 94.2 percent. The user satisfaction rating on patent examination quality is 86.3, keeping in the satisfactory range for 14 consecutive years.

Digital Construction

The “1+5+N” information public service product portfolio has taken shape, with the national IP public service network as a hub, and the patent search and analysis system, the design patent search public service system, the patent information service platform for key industries, the public service system for IP data resources and the EU trademark inquiry system as main carriers, in coordination with the patent thematic database. Seven patent thematic databases were built to provide public welfare industry information services to the public, basic data of 59 types of IPRs newly opened. The pilot sharing of e-commerce platform patent evaluation reports was continuously promoted, and the sharing agreement was signed with additional 11 e-commerce platforms in 2023 to provide support in e-commerce for strengthening IP protection.

Statistics Products

CNIPA has continuously enriched statistical information products, contribute to help the digitalization and greening of the economy and society. Focusing on digitalization, CNIPA published *the Concordance Table between Core Industry Classification of Digital Economy and International Patent Classification* and *the Patent Classification Scheme on Key Digital Technologies* covering seven major technology fields such as artificial intelligence, high-end computer chip, quantum information, etc., and publish *the Patent Statistical Analysis Report of Core Industry of Digital Economy (2023)*. Focusing on green development, CNIPA published *the Classification Scheme for Green Patent Technologies*, carried out patent statistical analysis focusing on key technologies such as carbon reduction, zero-carbon and negative-carbon, and published *the Report on the Statistical Analysis of Patents on Global Green and Low-Carbon Technologies in English and Chinese,* published *the Statistical Monitoring Report on China's Patent-Intensive Industries (2022)*, and organized the translation, compilation and publication of *the Compiled Statistical Reports on IP-intensive Industries (EU and U.K. Volume)* and *the Compiled Statistical Reports on IP-intensive Industries (China, U.S., R.Korea and Latin America Volume)*.

Patent Documentation Resource

In 2023, a total of 142 types of literature resources were allocated, including 7 types of patent resources and 135 types of non-patent resources, providing basic guarantee for patent examination, patent information public service, macro-management and related research; and patent document exchange was carried out with 28 countries (regions) or international organizations, and Chinese patent documents were granted to 5 PCT International Search and Preliminary Examination Authorities.

As of the end of 2023, 540 types of patent documentation resources were collected, including 191 types of bibliography data, 167 types of full-page image data, 83 types of full-text data, 18 types of thematic data, 72 types of auxiliary search data, and 20 types of other data. The bibliographic data, the full-page image data and the full-text data covered 104, 103 and 36 countries (regions) or international organizations, respectively.

International Cooperation

The flagship event marking the China-WIPO 50th anniversary of cooperation were held in Beijing. Chinese President Xi Jinping specially sent a congratulatory letter, Premier Li Qiang met with the Director General of WIPO, and Vice Premier Ding Xuexiang attended the home event to read out President Xi Jinping’s congratulatory letter, and delivered a speech. During the 64th Series of Meetings of the Assemblies of the Member States of WIPO, a series of events marking the China-WIPO 50th anniversary of cooperation was held in Geneva, including a historical photo exhibition and a China self-innovation products show.

CNIPA continues to deepen intellectual property cooperation under the Belt and Road Initiative. the 1st Meeting of China-Central Asia Heads of Intellectual Property Offices was held, establishing a new platform for IP cooperation with Central Asian countries. The 14th Meeting of China-ASEAN Heads of Intellectual Property Offices was held. The cooperative relationship was continuously deepened through biennial cooperation plans. CNIPA continuously carried out the Belt and Road Master Degree Program in Intellectual Property. 20 students from 15 Belt and Road Initiative (BRI) partner countries participated in this program in China. CNIPA held the training program on geographical indications and protection of traditional Chinese medicine for ASEAN

countries, the IP training program for Latin American countries, the training program on patent examination for the Gulf Cooperation Council (GCC) Patent Office, the training program for ASEAN Excellence Scholarship, etc.

CNIPA promoted the cooperation of IP5, hosted the IP5 Statistical Working Group Meeting to promote the implementation of the new vision of IP5 cooperation. More than 20 bilateral and trilateral cooperation projects were carried out with the JPO and the KIPO in the fields of patent examination, design, and automation.

CNIPA expanded and optimized the Patent Prosecution Highway (PPH) cooperation network, signed Memorandum of Understanding on PPH Cooperation with France and Bahrain, and extended the PPH pilot programs with the IP5 Offices, Eurasian Patent Office, Russia, the Czech Republic, Denmark, Norway, Japan, Chile and Saudi Arabia, bringing the number of PPH partners to 32.

CNIPA extended the PCT International Searching Authority pilot program with the European Patent Office. CNIPA conducted examiners exchanges with IP offices of Japan, Korea, the United Kingdom and Finland, jointly completed and published *the Report of Comparative Study on AI-Related Inventions* with the JPO, and deepened the cooperation in patent examination with the GCC Patent Office, Saudi Arabia, Cambodia, and Laos.

CNIPA production information

Table 2.4 shows production figures of patent applications, examination, grants, re-examination and invalidation, and PCT activities in the years 2022 and 2023. The data in table 2.4 concentrate only on patents for invention.

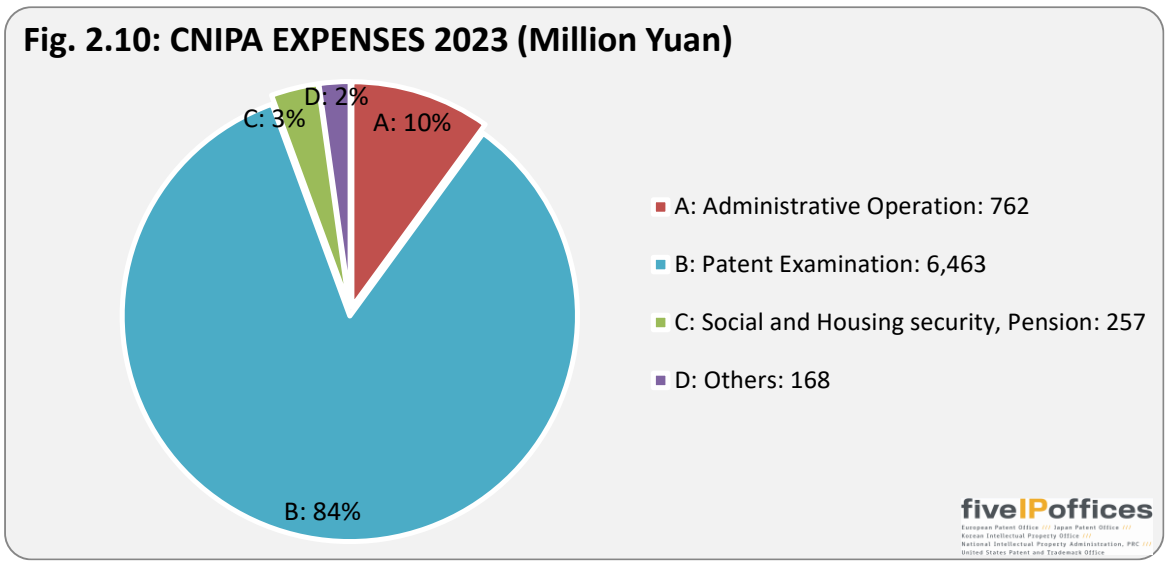
Table 2.4: CNIPA PRODUCTION INFORMATION

CNIPA PRODUCTION FIGURES	2022	2023	Change	% Change
Applications filed				
Domestic	1,464,605	1,522,292	+ 57,687	+ 3.9%
Foreign	154,663	155,409	+ 746	+ 0.5%
Total	**1,619,268**	**1,677,701**	**+ 58,433**	**+ 3.6%**
Examination				
First actions	1,311,273	1,457,265	+ 145,992	+ 11.1%
Final actions	1,475,405	1,618,806	+ 143,401	+ 9.7%
Grants				
Domestic	695,591	819,234	+ 123,643	+ 17.8%
Foreign	102,756	101,563	- 1,193	- 1.2%
Total	**798,347**	**920,797**	**+ 122,450**	**+ 15.3%**
Re-examination and invalidation				
Re-examination requests	96,713	99,087	+ 2,374	+ 2.5%
Invalidation request	1,431	1,638	+ 207	+ 14.5%
PCT activities				
International searches	77,669	n.a.	n.a	n.a
International preliminary examinations	394	n.a.	n.a	n.a

n.a. : not available

CNIPA Budget

Fig 2.10 shows CNIPA expenditures by category in 2023.[29]



A description of the items in Figure 2.10 can be found in Annex 1.

The CNIPA Organization Composition

The CNIPA has eight functional departments, including the General Office, Department of Treaty and Law, Strategic Planning Department, Intellectual Property Protection Department, Intellectual Property Utilization Promotion Department, Public Service Department, International Cooperation Department (Office of Hong Kong, Macao and Taiwan Affairs) and Personnel Department.

More information

Further information can be found on the CNIPA's Homepage:
english.cnipa.gov.cn/

[29] Percentages in this report may not add to 100 due to rounding.

United States Patent and Trademark Office

The USPTO's ultimate goal is to propel innovation, entrepreneurship, and creativity for the benefit of all Americans and people around the world. The USPTO's mission is to drive U.S. innovation, inclusive capitalism, and global competitiveness. The agency accomplishes its mission via its vision of unleashing America's potential by accelerating the creativity that drives U.S. innovation in all its forms, and by bolstering adoption of that innovation in key and emerging technologies while bringing more Americans into the innovation ecosystem. Guided by the USPTO's mission and vision, the USPTO's 2022-2026 Strategic Plan outlines five Agency goals:

Goal 1: Drive inclusive U.S. innovation and global competitiveness
Goal 2: Promote the efficient delivery of reliable IP rights
Goal 3: Promote the protection of IP against new and persistent threats
Goal 4: Bring innovation to impact for the public good
Goal 5: Generate impactful employee and customer experiences by maximizing agency operations

The USPTO fulfills the mandate of article I, section 8, clause 8 of the Constitution, which grants the Legislative Branch the power to "promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries"; and supports effective administration of the Commerce Clause of the Constitution (article I, section 8, clause 3), whose purpose is "[t]o regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes."

As an agency of the U.S. Department of Commerce, the USPTO supports the department's mission to create conditions for economic growth and opportunity for all communities by promoting accessible, strong, and effective IP rights to advance innovation, creativity, and entrepreneurship. The USPTO IP system incentivizes and protects the deep investment of time, money, resources, and collaboration needed to solve problems, deliver solutions, and enrich the lives of many Americans. The Agency provides valued products and services to its customers in exchange for fees that are appropriated to fund its operations. The powers and duties of the USPTO are vested in the Under Secretary of Commerce for Intellectual Property and Director of the USPTO, who consults with the Patent Public Advisory Committee and the Trademark Public Advisory Committee. The USPTO operates with two core business units, Patents and Trademarks.

Agency News

In FY 2023, the USPTO received 462,215 serialized patent applications, an increase of 1.0 percent over the number received in FY 2022. The number of utility pending applications increased by 15.1 percent over the prior year. The number of patent grants totaled 346,152, a 2.0 percent decrease from FY 2022. While the quantity of patent applications increased, processing time remained relatively stable with some fluctuations. The USPTO exceeded its FY 2023 Patent Term Adjustment (PTA) target of 80 percent, achieving 81 percent total compliance for mailed actions (i.e., office actions the agency mailed to applicants). An office action is an official letter from the patent examiner to the patent applicant during the patent examination process (i.e., patent prosecution). The USPTO did not meet its PTA compliance target for remaining inventory (i.e., cases awaiting action from the agency); total PTA compliance was 82 percent, 4 percent below the target of 86 percent. The agency has implemented

numerous approaches to address remaining inventory, including catch-up overtime, revisions to the examiner award program, and increased hiring targets.

Throughout FY 2023 the USPTO lent support for advancement of innovation in several key technology areas including climate protection. In February 2023, the USPTO announced a collaboration with the National Oceanic and Atmospheric Administration for an exchange of employees over the course of up to a year to strengthen the work at both Agencies to incentivize greater innovation in climate and green technology areas. This cooperation will aid the USPTO examiners when reviewing patent applications related to climate and environmental technologies. In March 2023, the USPTO announced a special category of its Patents for Humanity Program for green energy inventions. This new award category will provide business incentives for patent applicants, holders, and licensees whose inventions are addressing the challenges of climate change through green energy innovations, including wind, solar, hydrogen, hydropower, geothermal, and biofuels technologies. In May 2023, the USPTO, Federal Laboratory Consortium, and academic technology transfer non-profit AUTM hosted the Green Energy Innovation Expo to assist licensors of federally funded green energy technologies, including green hydrogen, energy storage, and wind energy, to network and meet with potential licensees to move green energy forward. In June 2023, the USPTO expanded and extended the Climate Change Mitigation Pilot Program by advancing more opportunities to encourage and expedite examination for innovations that lead to net-zero emissions by broadening the pool of eligible innovations.

Emerging technology tools using artificial intelligence (AI), machine learning (ML), and robotic process automation have brought opportunities to for operating efficiencies, cost savings, and enhancements of patent examiners access to prior art. In FY 2023 an increasing number of examiners are using Patents End-to-End Similarity Search, a trained AI model that produces a list of domestic and foreign patent documents based on examiner-selected application criteria. In addition to being subject to rigorous testing, the USPTO relies on human input for model improvement; these AI and ML tools collect real-time examiner feedback and are continuously improved to meet performance standards and foster effectiveness.

Throughout FY 2023, the USPTO conducted activities to support and empower underrepresented independent inventors, entrepreneurs, and small businesses in underserved communities. Programs included the Women's Entrepreneurship initiative; the Council for Inclusive Innovation (CI²) with IP leaders in corporate, academic, professional, and government organizations; and the USPTO's Innovator events for everyone. Under the CI², the USPTO created the First-Time Filer Expedited Examination Pilot Program which accelerates the first office action for participants, increasing the possibility of an early indication of patentability and allowing inventors to make business decisions earlier in the patent process. The USPTO established its entrepreneurship resources for the military community initiative to empower more veterans, military spouses, and service members to participate in the innovation ecosystem and to support their entrepreneurial pursuits. During FY 2023, the USPTO, in partnership with the Small Business Administration and other entrepreneurial support organizations, conducted road shows at eight military bases and delivered startup resources to nearly 500 individuals from four service branches.

In September 2023, the USPTO issued the 1 millionth design patent. Design filings have been mostly flat in the last three FYs following the large annual increase from FY 2020 to FY 2021.

The number of trademark applications received in FY 2023 were 6.4 percent below the prior year but about the same as the number received in FY 2020, marking a return to

historical growth rates. Trademarks met the 8.5 month first action pendency and slightly (0.1 months) fell short of the total pendency target of 14.5 months. To reduce the trademark backlog created in the recent years unprecedented growth and to enhance customer communication, in FY 2023 the USPTO hired a number of examining attorneys as well as specialists to support the examination of maintenance filings, and enlisted paralegal support for anti-scam work.

The USPTO is committed to connecting under resourced inventors and entrepreneurs to legal assistance through a variety of programs including the Patent Pro Bono Program, no-cost Patent Trial and Appeal Board and Trademark Trial Appeal Board services, and law school clinics that offer free legal assistance. For FY 2023 the Patent Pro Bono program budget was nearly doubled enabling the USPTO and volunteer partners to expand support to traditionally underserved communities and help foster a more inclusive and equitable innovation ecosystem. In FY 2023 the USPTO increased access to free legal services by expanding its Law School Clinic Certification Program to more law schools. Participating institutions provide free services to patent and trademark applicants, including help with application filing and trademark registration.

International Cooperation and Work Sharing

Throughout FY 2023, the USPTO represented the U.S. and the interests of U.S. rights holders at more than 45 high-level meetings of international organizations. In August 2023, the agency signed a memorandum of understanding (MOU) with Mexico that will allow for accelerated patent grant procedures to benefit U.S. patent holders. The USPTO concluded 15 other agreements and MOUs in FY 2023 with IP offices and partner organizations including Canada, Mongolia, and Panama.

USPTO production information

Table 2.5 includes production figures for application filings, PCT searches and examination, first actions, grants, applications in appeal and interference, and patent cases in litigation for the years 2022 and 2023.

Table 2.5: USPTO PRODUCTION INFORMATION

USPTO PRODUCTION FIGURES	2022	2023	Change	% Change
Applications filed				
Utility (patents for invention)[30]	594,340	598,090	+ 3,750	+ 0.6%
Domestic	273,585	275,889	+ 2,304	+ 0.8%
Foreign	320,755	322,201	+ 1,446	+ 0.5%
Plant	888	850	- 38	- 4.3%
Reissue	1,242	807	- 435	- 35.0%
Total utility, plant & reissue	596,470	599,747	+ 3,277	+ 0.5%
Design	52,923	56,225	+ 3,302	+ 6.2%
Provisional	146,737	149,643	+ 2,906	+ 2.0%
Total	796,130	805,615	+ 9,485	+ 1.2%
Request for continued examination (RCE)[31]	133,837	134,241	+ 404	+ 0.3%
PCT Chapter I searches	19,215	21,576	+ 2,361	+ 12.3%
PCT Chapter II examinations	689	515	- 174	- 25.3%
First actions (utility, plant, reissue)	493,599	528,873	+ 35,274	+ 7.1%
Grants (total)	323,418	315,245	- 8,173	- 2.5%
U.S. residents	141,938	148,071	+ 6,133	+ 4.3%
Foreign	181,480	167,174	- 14,306	- 7.9%
Japan	45,656	38,490	- 7,166	- 15.7%
EPC states	49,862	44,984	- 4,878	- 9.8%
R. Korea	22,031	22,081	+ 50	+ 0.2%
P.R. China	27,100	24,044	- 3,056	- 11.3%
Others	36,831	37,575	+ 744	+ 2.0%
Applications in appeal and interference proceedings (includes utility, plant, and reissue)				
Ex-parte cases received	4,682	4,262	- 420	- 9.0%
Ex-parte cases disposed	5,728	4,406	- 1,322	- 23.1%
Inter-partes cases received	4	0	- 4	- 100.0%
Inter-partes cases disposed	15	0	- 15	- 100.0%
Patent cases in litigation				
Cases filed	505	497	- 8	- 1.6%
Cases disposed	300	414	+ 114	+ 38.0%
Pending cases (end of calendar year)	605	795	+ 190	+ 31.4%

[30] Unless otherwise noted, the USPTO statistics presented elsewhere in this report are limited to utility patent applications and grants, and include Requests for Continued Examination (RCEs).
[31] A Request for Continued Examination is a USPTO procedure under which an applicant may obtain continued examination of an application by filing a submission and paying a specified fee, even if the application is under a final rejection, appeal, or a notice of allowance.

USPTO Budget

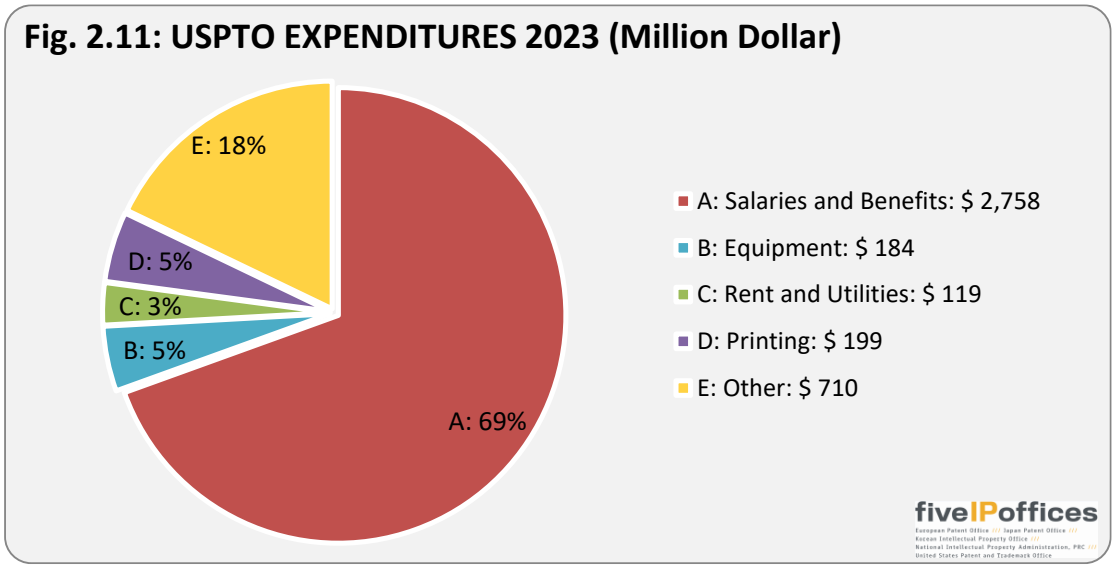
The USPTO utilizes an activity-based information methodology to allocate resources and costs that support programs and activities by programs and functions which align to the Agency goals. The FY 2023 expenditures were $3,968.1 million. Agency-wide, 18.5 percent of expenditures were allocated to IT security and associated IT costs.

Patent Program- $2,652.9 million Carries out the USPTO's mission by delivering patent services that promote inclusive innovation and by partnering domestically and globally to educate and advise on ways to deter IP violations in accordance with laws, regulations, and practices.

Trademark Program- $295.1 million Carries out the USPTO's mission by delivering trademark services that promote inclusive innovation and by partnering domestically and globally to educate and advise on ways to deter IP violations and fraudulent behavior in accordance with laws, regulations, and practices.

Cross Cutting Functions- $1,020.2 million The goal is to promote inclusive innovation, bring innovation to positive impact for the public good, and deliver impactful employee and customer experiences while maximizing agency operations.

A description of the items in Figure 2.11 can be found in Annex 1.



A description of the items in Figure 2.11 can be found in Annex 1.

USPTO Staff Composition

At the end of FY 2023, the USPTO work force was composed of 13,452 federal employees. Included in this number are 8,237 Utility, Plant, and Reissue patent examination staff and 331 Design examination staff; 756 Trademark examining attorney staff, and 4,128 managerial, policy, legal, administrative and technical support staff.

More information

Further information can be found on the USPTO's website: www.uspto.gov

Chapter 3

WORLDWIDE PATENTING ACTIVITY

Patenting activity is recognized as an indicator of innovation. This chapter examines worldwide patent activities in terms of patent applications and grants. The statistics mostly cover the five-year period from 2018 to 2022[32].

Hereafter, the counts of applications and filings are by the calendar year of filing and grants by the calendar year of grant. Statistics are derived primarily from the WIPO Statistics Database[33], as collected from offices all over the world. Patent statistics are sometimes retroactively updated and, where necessary, possible missing counts have been supplemented using other sources. But otherwise no estimated counts have been included to compensate for missing data. Considering that not all the offices report their filing statistics to the WIPO regularly enough, some of these data should be interpreted with care, especially when referring to countries outside the IP5 Blocs.

It should be noted that the number of inventions that lead to patent applications is less than the total number of applications filed. This is because the first filing for an invention that is made in one office is often followed by applications to some other offices, with each such application claiming the priority of the earlier first filing. First filings can be seen as an indicator of innovative activity, while foreign filings are an indicator of an intention to utilize such activity for international trade and globalization.

While demand for patent protection is considered principally by counting each national, regional, or PCT international application only once, alternative representations are also given in this chapter in terms of the demand for rights, after cumulating the number of designated countries over applications within regional procedures.

In this chapter, applications are counted in terms of patent filings, first filings, patent applications, and demand for national patent rights. These counting methods are associated with separate sections within the chapter.

- "Patent filings" include direct national, direct regional, and international phase PCT filings;
- "First filings" include initial patent applications filed prior to any later subsequent filings to extend the protection to other countries;
- "Patent applications" include direct national, direct regional, national stage PCT, and regional stage PCT applications;
- "Demand for national patent rights" includes direct national, national stage PCT, and designations in regional and in regional stage PCT applications.

See “Guide to Figures in Chapter 3” on the next page, and also the explanatory text associated with the individual figures, for further discussion about the applications associated with each of these counting methods.

[32] The statistical tables file found in the web version of this report includes extended time series for much of the data included in this chapter, www.fiveipoffices.org/statistics/statisticsreports.
[33] This edition refers to general patent data as of October 2024, and to PCT international phase application data as of May 2024, www.wipo.int/ipstats/en/index.html. For some statistics on 2023, see Chapter 4.

Patent grants are counted in the year that the grants are issued or published. As with the applications, alternative presentations are also given in this chapter for grants in terms of rights, after cumulating the number of designated countries in grants obtained from regional procedures.

The last part of this chapter discusses inter-bloc patent activity in terms of application flows between blocs and in terms of patent families. A patent family is a group of patent filings that claim the priority of a single filing, including the original priority forming filing itself and any subsequent filings made throughout the world. The set of distinct priority forming filings (that indexes the set of patent families), in principle, constitutes a better measure for first filings than aggregated domestic national filings. IP5 patent families are a highly filtered subset of patent families for which there is evidence of patenting activity in all IP5 Blocs.

GUIDE TO FIGURES IN CHAPTER 3

Due to the complexity of the patent system, different representations of the patent filing process are made to illustrate complementary parts of the process. The following scheme guides the reader to graphs that correspond to the different representations. This also describes the terminology used throughout Chapter 3. Additional explanatory text can be found with each of the referenced figures.

- **Figs. 3.1, 3.2, 3.3, and 3.4** show the numbers of *patent filings* in terms of application forms filled out. The counts include: direct national, direct regional filings (filed with the ARIPO, EAPO, EPO, GCCPO, OAPI[34]), and PCT international filings.

- **Figs. 3.5, 3.6, 3.7 and 3.14** show the numbers of requests for patents as *patent applications*. Direct applications to the offices are counted at the date of filing. PCT applications are counted at the moment they enter the national or regional phase. While direct national and direct regional filings are counted once, PCT filings are replicated over the numbers of national/regional procedures that are started.

- **Figs. 3.8, 3.9, and 3.10** show the numbers of *demands for national patent rights*. Direct national filings are counted only once. The counts for PCT applications entering national procedures are replicated over the number of countries where they enter this phase. This cumulates the demands for distinct national legal rights over the countries concerned. The counts for direct regional filings and PCT regional phase filings are replicated over the number of countries designated in the applications at the time that they enter the regional procedure. This gives a representation in terms of national patenting.

- **Fig. 3.11 and 3.12** show the numbers of *granted patents*. All grants are counted only once (in an analogous way to Figs. 3.5, 3.6, 3.7, and 3.14 for applications).

- **Fig. 3.13** shows the numbers of *national patent rights granted*. Direct national grants are counted only once, but the counts for regional office grants are replicated over the numbers of countries for which the grant is validated. This gives a representation in terms of national patent rights obtained in each bloc (comparable to Figs. 3.8, 3.9, and 3.10 for applications).

- **Figs. 3.15, 3.16, 3.17 and Table 3** show the numbers of *patent families* that are generated by the set of first filings. They also show the flows between blocs in terms of the first filings for which claims to priority rights were made by subsequent filings in other countries.

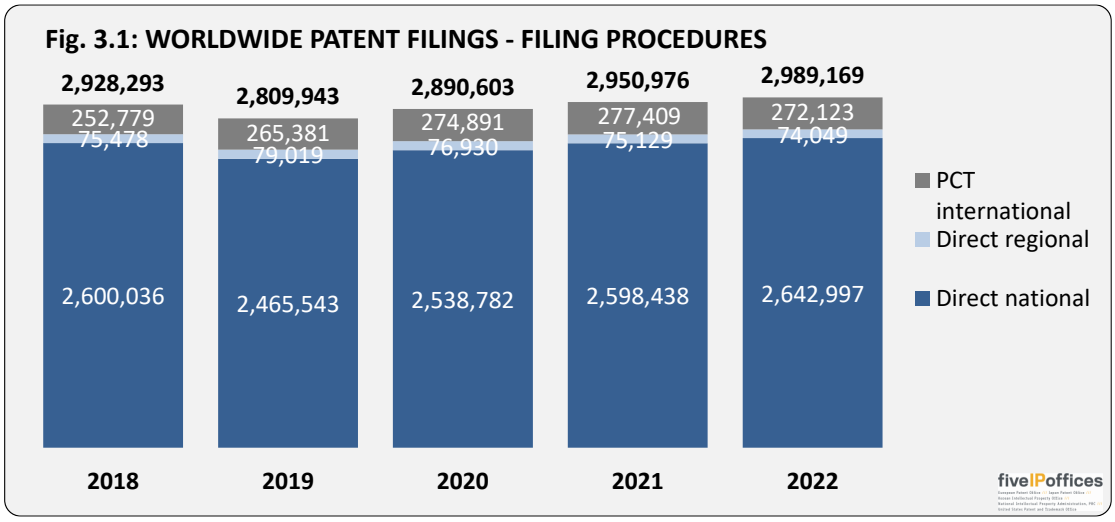
[34] The ARIPO is the African Regional Intellectual Property Office. The EAPO is the Eurasian Patent Organization. The GCCPO is the Gulf Cooperation Council Patent Office. The OAPI is the Organisation African Intellectual Property.

PATENT FILINGS

The patent filings that are counted in this section include direct national, direct regional and PCT filings in the international phase.

Figs. 3.1, 3.2, and 3.3 show the numbers of patent filings that were made throughout the world. Here, the filings are counted only once, which means that the number of countries designated in regional filings and in PCT international filings are not used in determining these counts. The total number represents a measure of the overall numbers of actions taken to assert IP rights around the world, although some inventions lead to filings in more than one office.

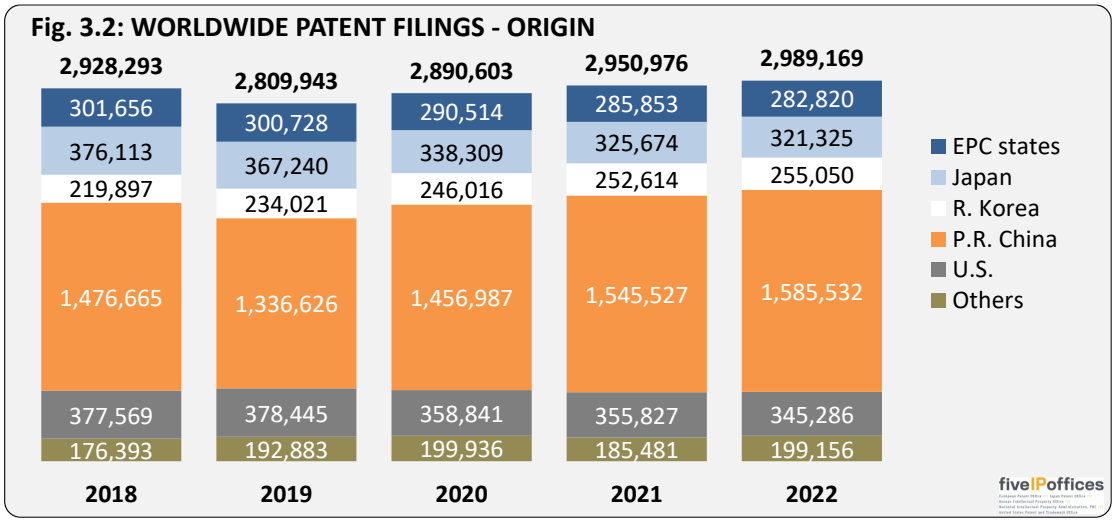
Figure 3.1 shows a breakdown of patent filings according to the three types of filing procedures.



In 2022, the number of patent filings increased by 1 percent to 2.99 million. The number of direct national filings increased by 2 percent, while direct regional decreased by 1 percent. PCT international phase filings decreased by 1 percent. Overall, 88 percent of the filings were made according to direct national procedures.

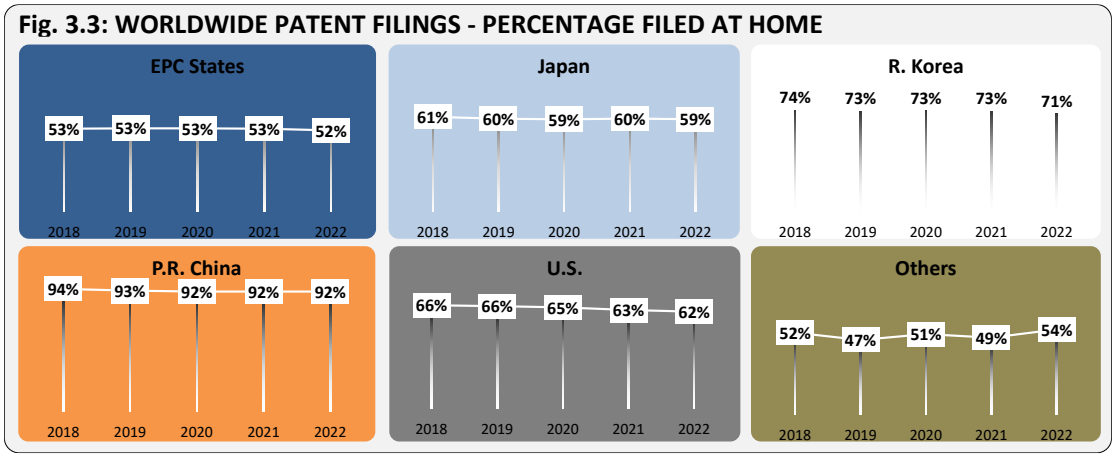
The contribution of the PCT system to filings will be discussed later in this chapter and in Chapter 5.

Figure 3.2 shows the worldwide patent filings of Figure 3.1 broken down by blocs of origin (residence of first-named applicant or inventor).



Between 2018 to 2022, the IP5 Bloc's annual share remained stable at around 93 percent. In 2022, the number of patent filings increased by 1 percent. The number of patent filings that originated from P.R. China and R. Korea increased by 3 percent and 1 percent respectively. Whereas, those originating from the EPC states, Japan, and U.S. decreased by 1 percent, 1 percent, and 3 percent respectively.

Figure 3.3 shows the proportion of patent filings throughout the world that are filed within the home bloc of origin (residence of first-named applicants or inventors).



For the IP5 Blocs, P.R. China had the largest proportion of filings made at home in 2022 with 92 percent. Among the IP5 blocs, the EPC states had[35] the lowest proportion with 52 percent.

Most national filings are made by residents of the countries concerned. To a large extent, filings abroad are made using regional or PCT procedures.

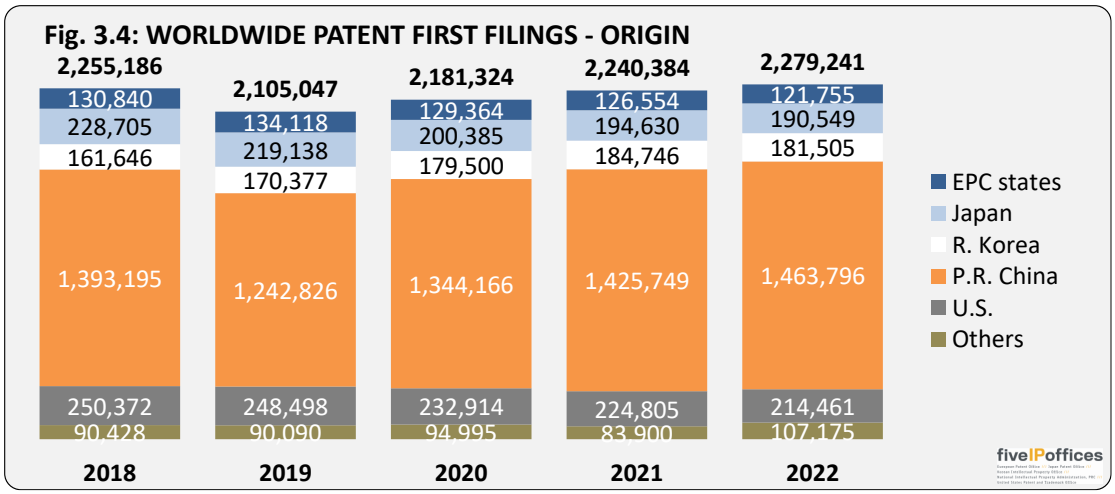
[35] For the purpose of reporting statistics for the EPC states considered as a bloc, a filing by a resident in an EPC state to another EPC state or to the EPO is considered to be filed within the bloc of origin. See the EPO section of Chapter 2 for a listing of the EPC states.

FIRST FILINGS

For the first filings counted in this section, all of the following appear only once: direct national, direct regional filings, and PCT international phase filings.

The process of obtaining patent protection starts with the first filing, an initial patent filing made to protect an invention or an innovation prior to any subsequent filings to extend the protection to other countries.

Figure 3.4 shows the development of first filings in the major filing blocs of origin (residence of first-named applicants or inventors).



The number of worldwide first filings increased by 2 percent from 2021 to 2022. After a marked decline in 2019, first filings from P.R. China continued to increase by 3 percent. First filings in the EPC states, Japan, R. Korea and U.S. decreased by 4 percent, 2 percent, 2 percent and 5 percent respectively.

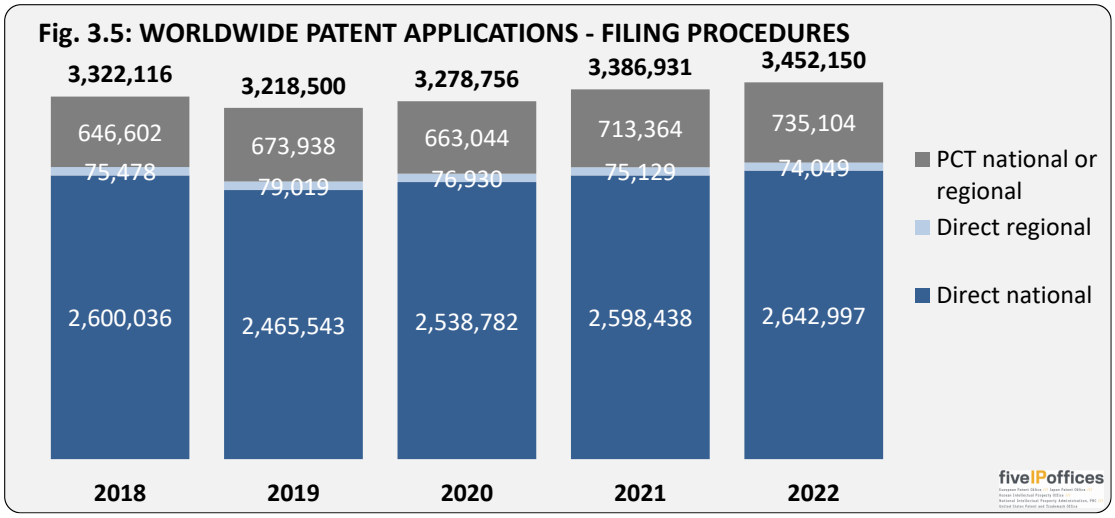
Comparison of Figure 3.2 and 3.4 enables an evaluation of the numbers of subsequent filings, where the first filing for an invention at one office leads on to further filings, either elsewhere or at the same office. From the difference in the total for 2022 between Figure 3.2 and Figure 3.4, it can be estimated that there are 709,928 subsequent filings, meaning that on average there were 0.32 subsequent filings per first filing made in 2021, assuming a one year delay (709,928 / 2,240,384 = 0.32).

PATENT APPLICATIONS

Patent applications counted in this section include direct national, direct regional, national stage PCT, and regional stage PCT applications.

Figs. 3.5, 3.6, and 3.7 describe the development of the numbers of patent applications in terms of requests for patents that entered a grant procedure. Note that direct national and direct regional applications enter a grant procedure when filed, while, in the case of PCT applications, the grant procedure is delayed to the end of the international phase[36]. In the following figures, the number of PCT applications consists of a count of the applications that entered a national or regional stage in the corresponding year. This leads to higher numbers than in the previous section, because one PCT international filing usually enters into several national or regional procedures. For example, one PCT application (as reported in Figure 3.1) may result in an EPO PCT regional phase entry, a U.S. PCT national phase entry, and an Australian PCT national phase entry, thus producing three PCT national/regional phase entry applications.

Figure 3.5 shows the development of worldwide patent applications broken down by filing procedures.

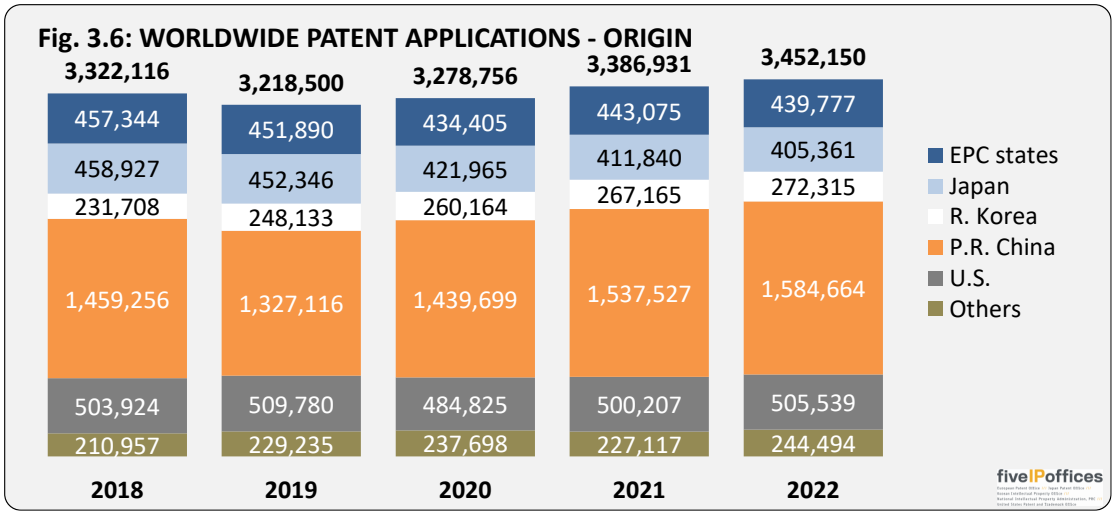


In 2022, nearly 3.5 million patent applications were filed worldwide. This represents a 2 percent increase compared to 2021 and a 5 percent increase from 2020.

The number of direct national applications increased by 2 percent, while the number of direct regional decreased by 1 percent. The number of PCT national/regional applications increased by 3 percent.

[36] The national or regional phase under the PCT is entered up to 30 months or 31 months after the priority date of the first filing.

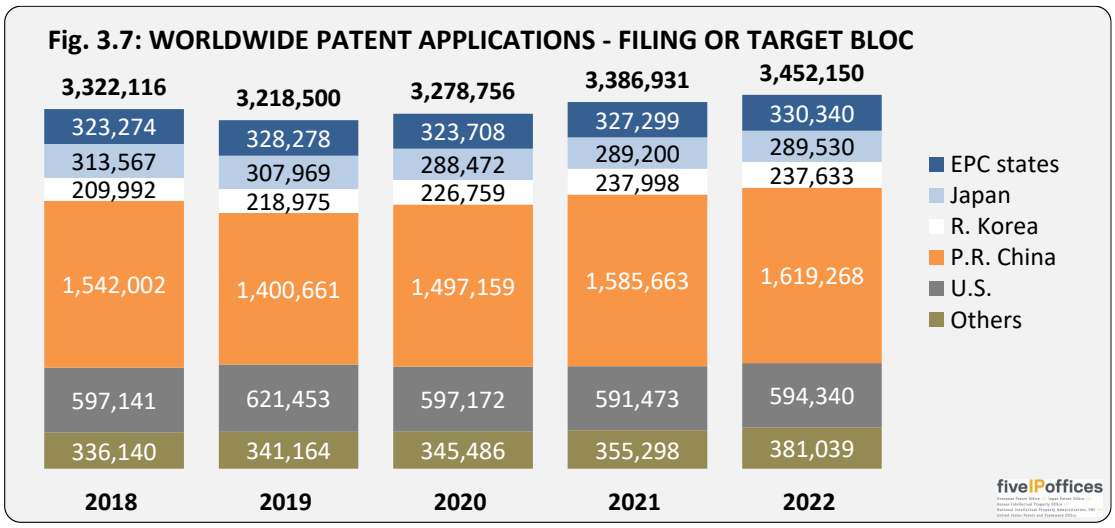
Figure 3.6 shows the origins (residence of first-named applicants or inventors) of the worldwide patent applications of Figure 3.5 entering a national or regional grant procedure.



In 2022, the largest share of applications in the IP5 Bloc originated from P.R. China. P.R. China also had the largest percentage increase in applications by origin in 2022 (3 percent). The number of applications from R. Korea, and the U.S. increased by 2 percent and 1 percent respectively, while the number of applications from the EPC states and Japan decreased by 1 percent and 2 percent respectively.

The data for the Others can only be compared between years with care. The changes from year to year reflect a different number of countries reporting their count of applications as well as changes in the numbers of applications.

Figure 3.7 shows the distribution of the worldwide patent applications according to the filing blocs and is based on the same data as in Figure 3.5 and Figure 3.6.



In 2022, applications increased by 1 percent in the EPC states and 2 percent in P.R. China. Applications in Japan, R. Korea, and the U.S. increased by less than 1 percent respectively. Worldwide, applications increased by about 2 percent.

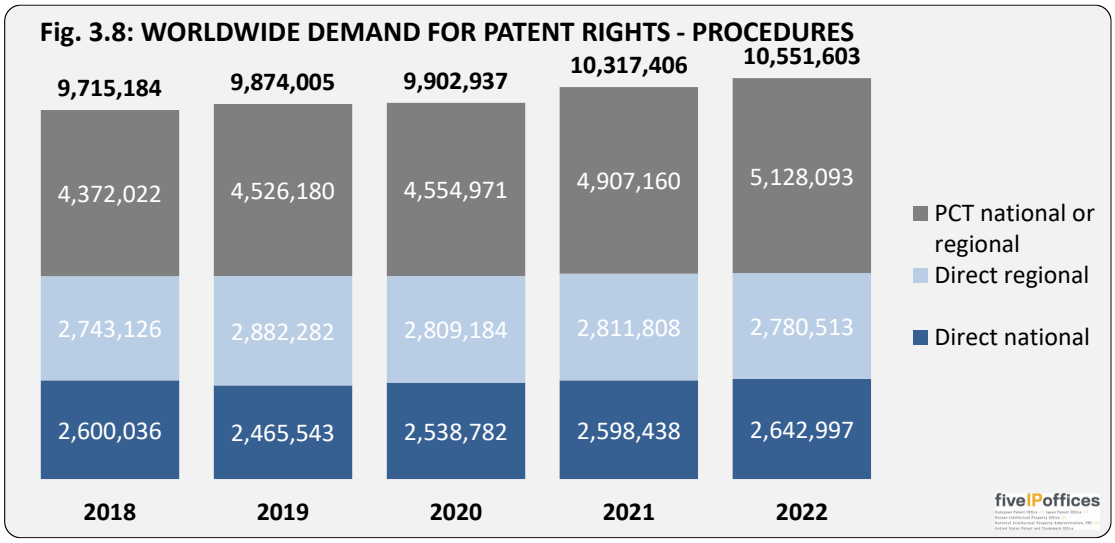
DEMAND FOR NATIONAL PATENT RIGHTS

Patent applications counted in this section include direct national applications, national stage PCT applications, and designated countries, both in direct regional and in regional stage PCT applications.

With an increasing use of PCT and regional systems, and also the increasing number of countries joining such systems, the number of applications filed corresponds to a large number of demands for national patent rights. The number cumulates designated countries that are covered by the applications. This effectively measures the number of national patent applications that would have been necessary to seek patent protection in the same countries if there were no PCT or regional systems.

The direct national applications have effect in one country only, as does any PCT application entering one national phase procedure. But direct regional applications and PCT applications entering a regional system are demands for almost each and every individual member country. So, demand counts for regional offices are expanded to the numbers of countries covered by regional systems[37].

Figure 3.8 shows the demand for national patent rights broken down by filing procedures.



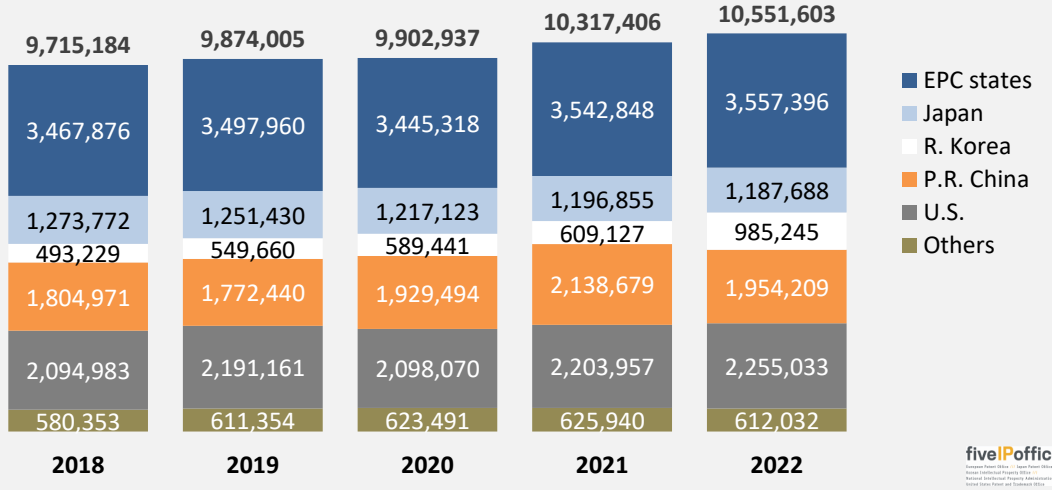
From 2021 to 2022, the worldwide demand for patent rights increased by 2 percent. In 2022, there was an increase in the use of direct national and PCT national or regional filing procedures, while the use of the direct regional procedures decreased by 1 percent.

Centralized filing procedures (PCT and direct regional) made up about 75 percent of the total demand in 2022. This illustrates the importance of these procedures to help users to expand their patent protection without needing to make separate applications to every country of interest.

[37] At the end of 2021, 90 states were party to a regional patent system, ARIPO 20 (Harare Agreement), EAPC 8, EPC 39, GCCPO 6 and OAPI 17. Also, at the end of 2021, 153 states were party to the PCT (157 end of March 2023). In addition, national patents can also be created in other states that have extension or validation agreements with the EPO (see Chapter 2).

Figure 3.9 shows the demand for national patent rights by blocs of origin (residence of first-named applicants or inventors) and is based on the same data as Figure 3.8.

Fig. 3.9: WORLDWIDE DEMAND FOR PATENT RIGHTS - ORIGIN

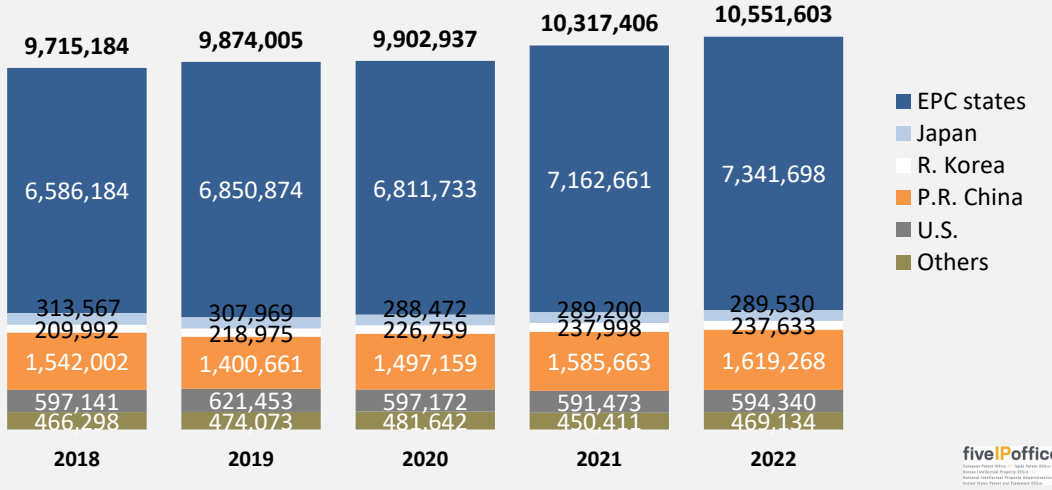


From 2021 to 2022, the worldwide demand for patent right increased by 2 percent. Demand from the R. Korea and the U.S. increased by 62 percent and 2 percent respectively, and the EPC states increased by less than 1 percent. Demand from Japan and P.R. China decreased by 1 percent and 9 percent respectively.

The large share of the EPC states reflects, among other factors, the intensive use of the international and regional systems there. This is shown even more clearly in the next chart for the distribution of the patent rights.

Figure 3.10 shows the demand for national patent rights according to the filing blocs and is based on the same data as in Figure 3.8 and Figure 3.9.

Fig. 3.10: WORLDWIDE DEMAND FOR PATENT RIGHTS - FILING BLOC

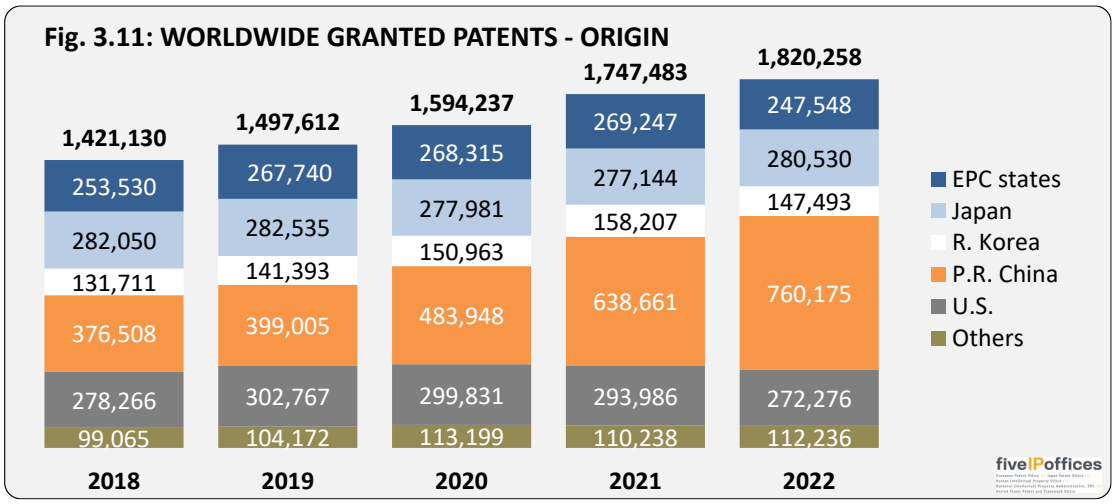


This chart illustrates the influence of regional patent systems. In 2022, the demand for national patent rights increased in the EPC states and P.R. China by 2 percent each, while Japan and the U.S. less than 1 percent each. Demand in the R. Korea decreased by less than 1 percent.

GRANTED PATENTS

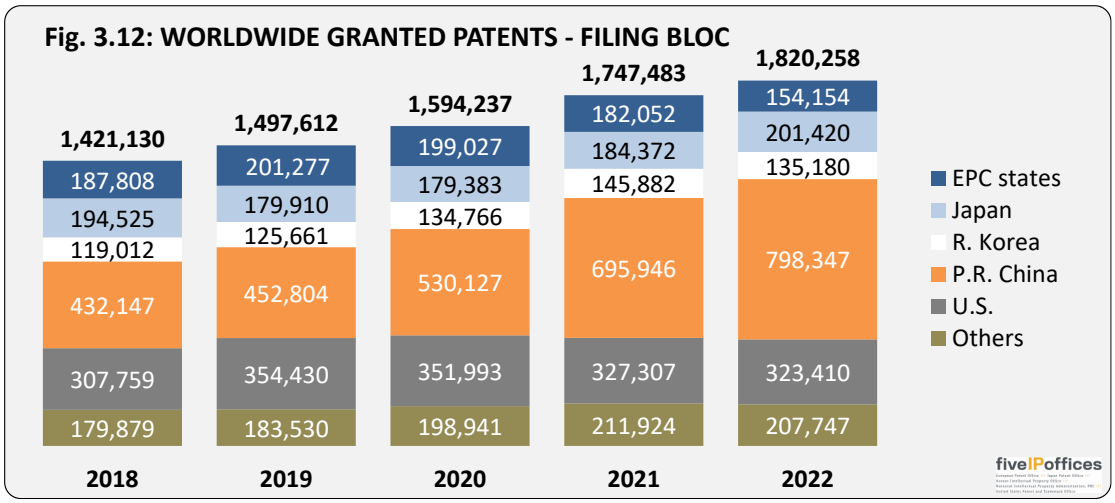
The development of the use of patents is shown in this section in terms of grants.

Figure 3.11 shows the granted patent by blocs of origin (residence of first-named applicants or inventors).



The total number of worldwide granted patents increased by 4 percent in 2022. Patents granted to residents of the EPC states, R. Korea and the U.S. decreased by 8 percent, 7 percent and 7 percent. For residents of Japan, granted patents increased by 1 percent, and by 19 percent for residents of P.R. China.

Figure 3.12 displays the breakdowns of the numbers of granted patents in each of the blocs.



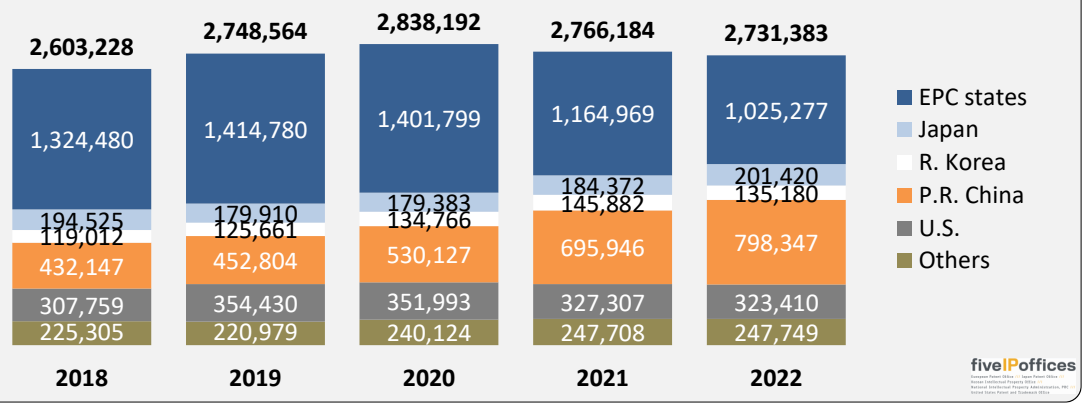
P.R. China had the largest percentage increase at 15 percent. The numbers of granted patents in the EPC member states, R. Korea and the U.S. decreased by 15 percent, 7 percent and 1 percent respectively. It increased by 9 percent in Japan.

The data for Others should be compared between years with caution. The changes from year to year may reflect different numbers of countries reporting their counts of grants as well as changes in the numbers of grants.

Granted patents are counted only once per office, although the same invention may lead to grants at several offices. However, each grant action by a regional office (e.g. the EPO) can lead to as many national patents as the number of member states that have been designated. This has an effect only in the EPC states and Others, as shown in the following Figure 3.12.

Figure 3.13 shows validated national grants resulting from the decisions reported in Figure 3.12. Direct national grants are counted only once, but the counts for regional office grants are replicated over the numbers of countries for which the grant is validated. This gives a representation in terms of national patent rights obtained in each bloc.

Fig. 3.13: NATIONAL PATENT RIGHTS GRANTED - FILING BLOC



In 2022, more than 2.7 million patent rights were granted, which represents a 1 percent decrease compared to 2021.

The fact that the EPC states bloc is made up of many countries, with an option for a centralized grant procedure at the EPO, explains why the number of patent rights granted there in Figure 3.13 is much larger than the number of grant actions shown in Figure 3.12.

The number of national patent rights granted by the EPC states decreased by 12 percent. Information for the Japan, P.R. China, R. Korea, and U.S. blocs is the same as in Fig 3.12 as on the previous page.

The data for Others should be compared between years with caution. The changes from year to year may reflect different numbers of countries reporting their count of grants as well as changes in the numbers of grants and countries covered there by regional patents.

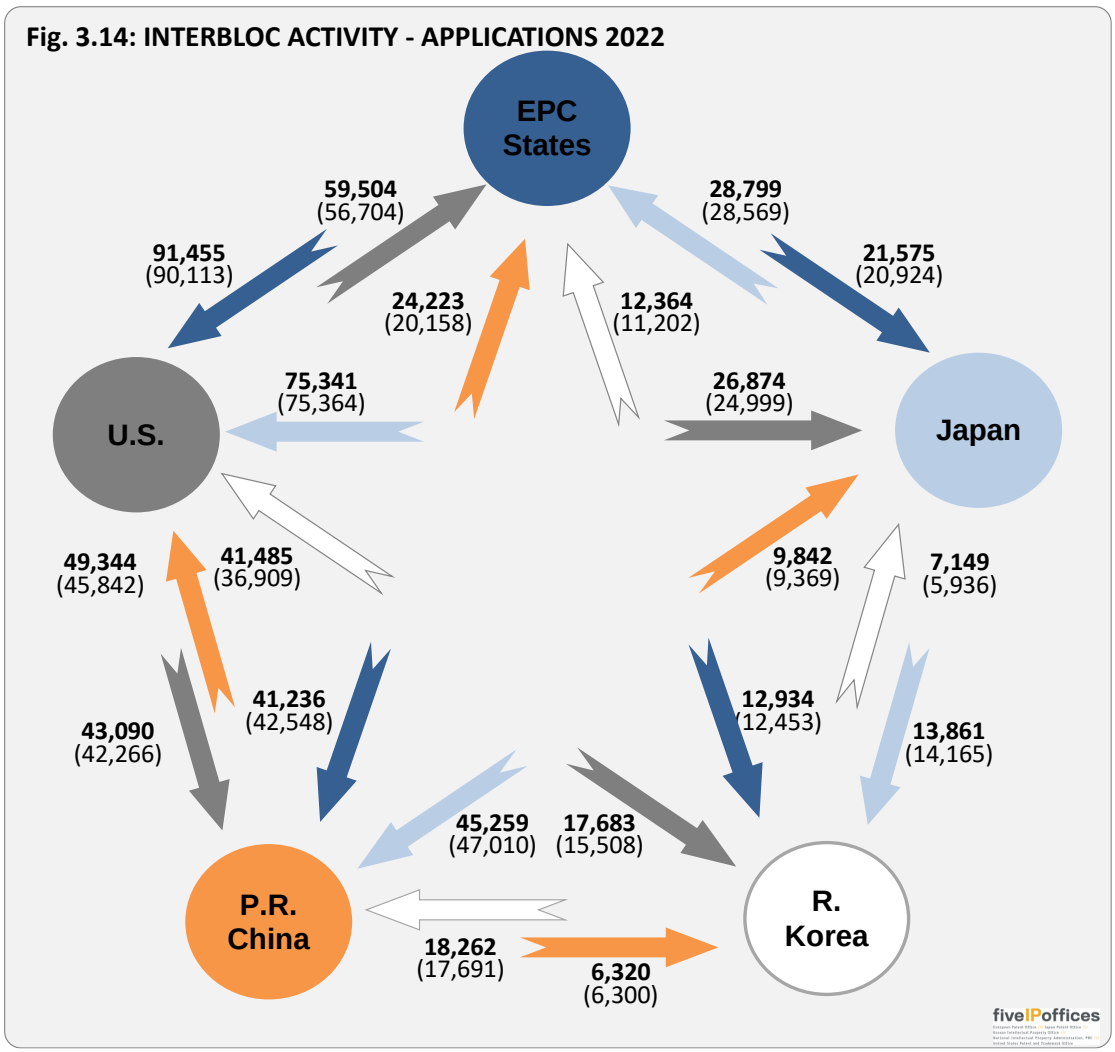
INTER-BLOC ACTIVITY

In this section, the flows between the different blocs and especially the IP5 Blocs are analysed first in terms of applications and then in terms of patent families.

FLOWS OF APPLICATIONS

Figure 3.14 shows the flows of patent applications between IP5 Blocs (residence of first-named applicants or inventors, as in Figure 3.5) in 2022, with 2021 figures given in parentheses.

Direct applications to the offices are counted at the date of filing. PCT applications are counted at the moment they enter the national or regional phase. Direct national and direct regional applications are counted only once. PCT applications are replicated over the numbers of national or regional procedures that are started.



As a general pattern, when applying abroad there were more applications in the U.S. than in any of the other IP5 Blocs. When filing abroad, U.S. applicants applied more in the EPC states than in any of the other IP5 Blocs. In 2022, the largest gap between blocs are between Japan and U.S., Japan and P.R. China, and between EPC states and U.S.

In 2022, four of the twenty inter-bloc flows decreased to some extent. Three of the four flows from Japan decreased. All flows from P.R. China, R. Korea and the U.S. increased. The flow from Japan to the U.S. decreased, while other flows to the U.S. increased.

PATENT FAMILIES

A patent family is a group of patent filings that claim the priority of a single first filing.

The information in this section on the flows of patent families between blocs was obtained from the DOCumentDataBase (DOCDB)[38] of worldwide patent publications. The statistics are based on the references to priorities that were given in published applications and grants. For counts of first filings in this section, the numbers of domestic national filings are taken, as in Figure 3.4. Due to the delay in publication (relative to the time of filing), patent family counts can only be reported with accuracy after several years have passed.

The following Table 3 shows the numbers of first filings per bloc and details of flows of patent families between blocs for the priority years 2018 and 2019. Each percentage under a number translates this number into a proportion of the number of first filings made in the initial filing bloc where the priority filings were made.

Table 3: NUMBERS OF PATENT FAMILIES

Year of priority: 2018

Bloc of origin from which priority is claimed	**First filings** in bloc of origin	**Flows to subsequent filings** First filings in bloc of origin leading to priority claims in filings in:								**IP5 Patent Families** from bloc of origin
		Any other bloc	Any other IP5 bloc	EPC states	Japan	R. Korea	P.R. China	U.S.	Other countries	
EPC states	130,840	54,342 (41.5%)	52,870 (40.4%)		15,708 (12.0%)	10,070 (7.7%)	36,208 (27.7%)	47,347 (36.2%)	17,884 (13.7%)	6,926 (5.3%)
Japan	228,705	70,530 (30.8%)	68,305 (29.9%)	24,859 (10.9%)		13,930 (6.1%)	46,450 (20.3%)	56,459 (24.7%)	16,208 (7.1%)	5,696 (2.5%)
R. Korea	161,646	26,452 (16.4%)	26,257 (16.2%)	9,628 (6.0%)	5,901 (3.7%)		16,896 (10.5%)	23,743 (14.7%)	3,198 (2.0%)	3,496 (2.2%)
P.R. China	1,393,195	35,510 (2.5%)	33,166 (2.4%)	13,770 (1.0%)	7,408 (0.5%)	4,009 (0.3%)		29,772 (2.1%)	7,632 (0.5%)	2,468 (0.2%)
U.S.	250,372	92,406 (36.9%)	84,350 (33.7%)	68,584 (27.4%)	29,439 (11.8%)	20,805 (8.3%)	59,408 (23.7%)		47,299 (18.9%)	13,208 (5.3%)
IP5 blocs substotal	2,164,758	279,240 (12.9%)	264,948 (12.2%)	116,841 (5.4%)	58,456 (2.7%)	48,814 (2.3%)	158,962 (7.3%)	157,321 (7.3%)	92,221 (4.3%)	31,794 (1.5%)
Others	90,428	19,966 (22.1%)	9,016 (10.0%)	6,862 (7.6%)	3,402 (3.8%)	1,885 (2.1%)	8,373 (9.3%)	16,263 (18.0%)		990 (1.1%)
Globla total	2,255,186	299,206 (13.3%)	273,964 (12.1%)	123,703 (5.5%)	61,858 (2.7%)	50,699 (2.2%)	167,335 (7.4%)	173,584 (7.7%)	92,221 (4.1%)	32,784 (1.5%)

Year of priority: 2019

Bloc of origin from which priority is claimed	**First filings** in bloc of origin	**Flows to subsequent filings** First filings in bloc of origin leading to priority claims in filings in:								**IP5 Patent Families** from bloc of origin
		Any other bloc	Any other IP5 bloc	EPC states	Japan	R. Korea	P.R. China	U.S.	Other countries	
EPC states	134,118	54,923 (41.0%)	53,670 (40.0%)		16,743 (12.5%)	10,667 (8.0%)	36,880 (27.5%)	47,941 (35.7%)	17,356 (12.9%)	7,426 (5.5%)
Japan	219,138	66,430 (30.3%)	64,693 (29.5%)	23,727 (10.8%)		13,230 (6.0%)	45,134 (20.6%)	52,823 (24.1%)	14,451 (6.6%)	5,321 (2.4%)
R. Korea	170,377	29,326 (17.2%)	29,143 (17.1%)	10,866 (6.4%)	5,935 (3.5%)		17,266 (10.1%)	26,746 (15.7%)	3,131 (1.8%)	3,513 (2.1%)
P.R. China	1,242,826	41,196 (3.3%)	38,559 (3.1%)	16,868 (1.4%)	9,768 (0.8%)	4,877 (0.4%)		32,197 (2.6%)	8,102 (0.7%)	2,884 (0.2%)
U.S.	248,498	96,457 (38.8%)	88,837 (35.7%)	72,103 (29.0%)	31,774 (12.8%)	23,620 (9.5%)	62,361 (25.1%)		47,778 (19.2%)	14,714 (5.9%)
IP5 blocs substotal	2,014,957	288,332 (14.3%)	274,902 (13.6%)	123,564 (6.1%)	64,220 (3.2%)	52,394 (2.6%)	161,641 (8.0%)	159,707 (7.9%)	90,818 (4.5%)	33,858 (1.7%)
Others	90,090	20,562 (22.8%)	9,476 (10.5%)	7,333 (8.1%)	3,698 (4.1%)	2,484 (2.8%)	8,687 (9.6%)	16,483 (18.3%)		1,101 (1.2%)
Globla total	2,105,047	308,894 (14.7%)	284,378 (13.5%)	130,897 (6.2%)	67,918 (3.2%)	54,878 (2.6%)	170,328 (8.1%)	176,190 (8.4%)	90,818 (4.3%)	34,959 (1.7%)

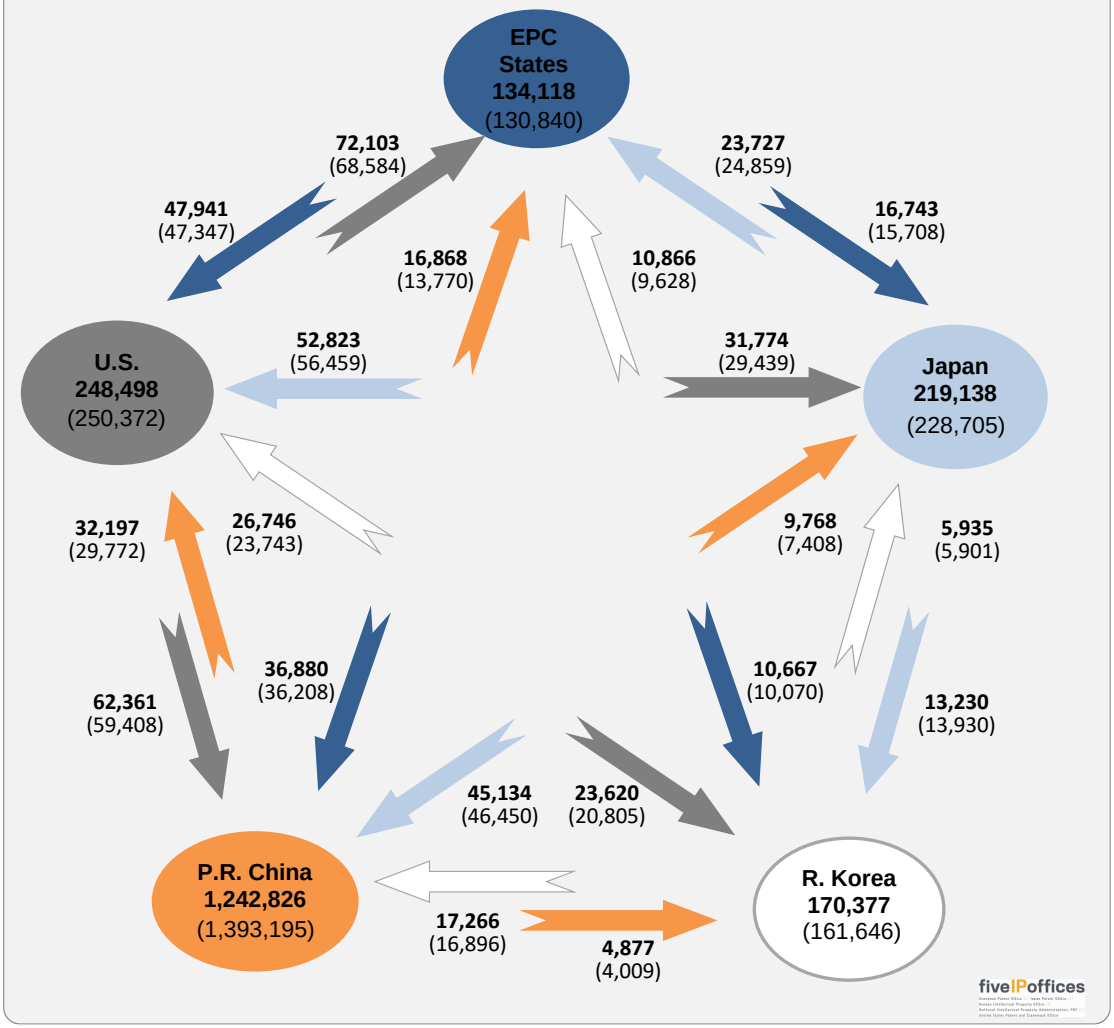
Source: EPO DOCDB Database

Figure 3.15 shows the flows of patent families from first filings (at the patent offices of the specified IP5 Bloc) to subsequent filings among the IP5, with application counts based on the bloc of the patent office from which the claimed priority was filed. The number given for each bloc is the total number of first filings in 2019. The flow figures

[38] DOCDB is the EPO master documentation database of patent publications, with worldwide coverage containing bibliographic data, abstracts and citations (but not the full text of the applications).

between blocs of origin and target blocs indicate the numbers of 2019 first filings from the bloc of origin that led to subsequent filings in the target bloc. The comparable figures for 2018 are given in parentheses.

Fig. 3.15: INTERBLOC ACTIVITY - FIRST FILINGS 2019 FILED ABROAD



From information in Table 3, out of all first filings in the IP5 Blocs in 2019 (2,014,957), 14 percent formed patent families that included at least one of the remaining IP5 Blocs (274,902. Proceeding to a higher degree of selectivity, only 2 percent of all first filings in the IP5 Blocs in 2019 formed IP5 patent families, where activities of first and/or subsequent filings were made in all the IP5 Blocs.

The IP5 patent family proportion of first filings in 2019 differed considerably according to the bloc of origin of the first filings, as can be seen in Table 3 (EPC states 5.5 percent, Japan 2.4 percent, R. Korea 2.1 percent, P.R. China 0.2 percent, U.S. 5.9 percent, and for Others 1.2 percent).

Figure 3.16 presents a separate diagram for each IP5 Bloc to display the percentages of first filings in that Bloc that led to subsequent filings in each of the other IP5 Blocs. The diagrams show graphical displays of 2019 patent family data as presented in Table 3. Four colored circles appear in each diagram, with each circle representing the percentage of subsequent filings in an IP5 Bloc that resulted from the number of first filings in the bloc of origin. Areas where the circles overlap correspond to subsequent

filings in more than one other IP5 Bloc. Recall that, in the case of the EPC states, the activities at national offices are included as well as at the EPO.

Above each diagram appears the total number of first filings that were received in each of the IP5 Blocs in 2019. Then the proportions of those first filings that led on to subsequent filings in each other bloc are shown. Some of these percentages also appear in the lower part of Table 3.

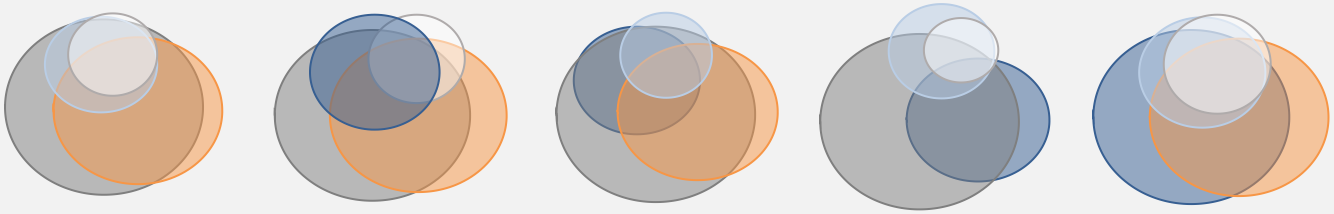
Underneath the colored diagrams, the percentages next to the bloc combinations show subsidiary percentages of subsequent filings that flowed to more than one other IP5 Bloc.

For instance, patent families from first filings in EPC member states that were subsequently filed in the P.R. China and the U.S. blocs are indicated in the graphical display by the area where the orange and grey circles overlap in the first diagram. The corresponding percentage is 23.5 percent, as shown next to the pair of yellow and green dots that appear lower down in the figure. The non-overlapping areas of the graphical displays are representative of the percentage or number of patent families that were not subsequently filed in any of the other IP5 Blocs. For instance, for first filings in EPC states, the small non-overlapping area of the Japan circle indicates that only a small percentage and number of the patent families from EPC states were filed in Japan without also being filed in at least one of the other IP5 Blocs, as well.

The last row of the table in Figure 3.16 shows the proportions of IP5 patent families, as also appear in the last column of the lower part of Table 3.

Fig. 3.16: 2019 PATENT FAMILIES - PERCENTAGES OF FIRST FILINGS WITH SUBSEQUENT FILINGS IN OTHER IP5 BLOCS

First filings in	EPC states offices*	Japan (JPO)	R.Korea (KIPO)	P.R.China (CNIPA)	U.S. (USPTO)
	134,118	219,138	170,377	1,242,826	248,498
Bilateral families with subsequent filings in					
EPC states	-	10.8%	6.4%	1.4%	29.0%
Japan	12.5%	-	3.5%	0.8%	12.8%
R. Korea	8.0%	6.0%	-	0.4%	9.5%
P.R. China	27.5%	20.6%	10.1%	-	25.1%
U.S.	35.7%	24.1%	15.7%	2.6%	-



Three bloc families with subsequent filings in					
EPC states & Japan	-	-	2.3%	0.4%	11.4%
EPC states & R. Korea	-	2.7%	-	0.3%	8.0%
EPC states & P.R. China	-	8.7%	5.0%	-	19.2%
EPC states & U.S.	-	9.7%	6.1%	1.1%	-
Japan & R. Korea	6.2%	-	-	0.3%	7.0%
Japan & P.R. China	10.9%	-	2.8%	-	10.6%
Japan & U.S.	11.6%	-	3.1%	0.5%	-
R. Korea & U.S.	7.3%	4.2%	-	0.3%	-
P.R. China & R. Korea	7.2%	5.5%	-	-	8.5%
P.R. China & U.S.	23.5%	15.8%	9.0%	-	-
Four bloc families with subsequent filings in					
EPC states & Japan & R. Korea	-	-	-	0.2%	6.3%
EPC states & Japan & P.R. China	-	-	2.1%	-	9.8%
EPC states & Japan & U.S.	-	-	2.2%	0.4%	-
EPC states & R. Korea & P.R. China	-	2.6%	-	-	7.4%
EPC states & R. Korea & U.S.	-	2.5%	-	0.3%	-
EPC states & P.R. China & U.S.	-	8.1%	4.9%	-	-
Japan & R. Korea & P.R. China	5.8%	-	-	-	6.4%
Japan & R. Korea & U.S.	5.9%	-	-	0.3%	-
Japan & P.R. China & U.S.	10.3%	-	2.6%	-	-
P.R. China & R. Korea & U.S.	6.7%	3.9%	-	-	-
IP5 families	5.5%	2.4%	2.1%	0.2%	5.9%

* EPO or EPC states national offices

From Figure 3.16 and Table 3, the 2019 data indicate that the U.S. market may be considered as the most important foreign market for the other IP5 Blocs since, for each of those blocs, subsequent applications in the U.S. represent the highest percentages among target blocs. The second most important market for the other IP5 Blocs is P.R. China. From U.S., the most important foreign market is the EPC States, followed by P.R. China. From P.R. China, the most important foreign market is U.S., followed by the EPC States.

For the first filings in the EPC member states, the largest percentage of subsequent filings is directed to the U.S. (35.7 percent). First filings in the EPC member states tend to result in a higher percentage of subsequent filings overseas, as compared to the first filings in other IP5 Blocs, except for the case of first filings from U.S. going to R. Korea.

For the first filings in Japan, the largest percentage of subsequent applications is directed to the U.S. (24.1 percent) and P.R. China is the next largest (20.6 percent), while the EPC states is 10.8 percent.

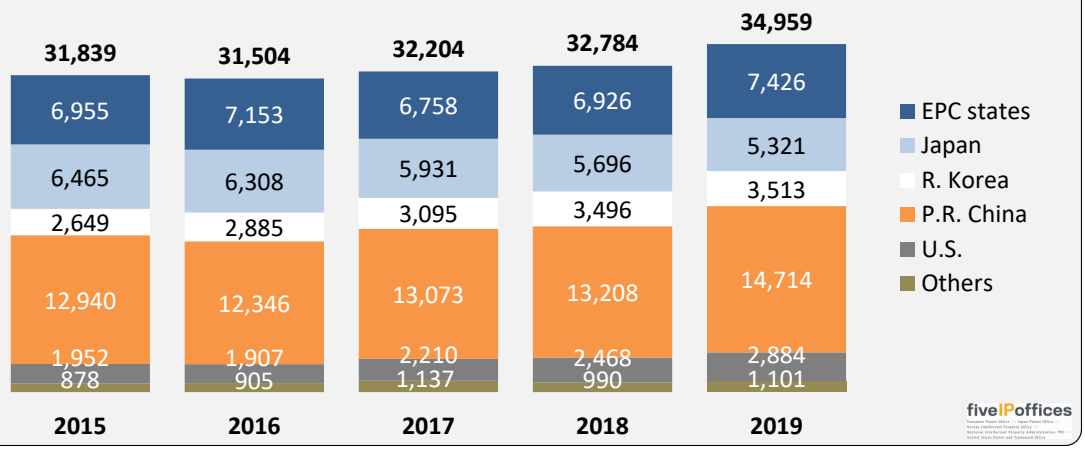
For the first filings in R. Korea, as with the other blocs, the percentage of subsequent applications filed in the U.S. (15.7 percent) is the largest, followed by P.R. China (10.1 percent). The percentage of subsequent applications filed in the EPC member states is 6.4 percent.

For the first filings in P.R. China, the percentage of subsequent applications filed in the U.S. (2.6 percent) is the largest. The percentage filed in the EPC member states is the next largest (1.4 percent), while in the Japan is 0.8 percent. Despite the low proportions of first filings in P.R. China that led to subsequent applications anywhere else, rapidly growing numbers of first filings have resulted in continued growth of the absolute numbers of patent families flowing out to other IP5 Blocs, as can be seen by comparing the 2018 and the 2019 data in Table 3 (33,166 compared to 38,559, respectively).

Among the first filings in the U.S., the highest percentage flows to the EPC member states (29.0 percent). The percentage filed in the P.R. China (25.1 percent) is the next highest, while filings in Japan and R. Korea are at 12.8 percent and 9.5 percent, respectively.

Figure 3.17 shows the development over time of IP5 patent families by bloc of origin (residence of first-named applicants or inventors) of the priority forming filings.

Fig. 3.17: IP5 PATENT FAMILIES - ORIGIN



The total number of IP5 patent families in 2019 was 34,959 of which 42 percent were from the P.R. China ., 21 percent were from the EPC states, 15 percent were from Japan, 10 percent were from R. Korea, 8 percent were from U.S., and 3 percent were from Others.

Chapter 4

PATENT ACTIVITY AT THE IP5 OFFICES

This chapter presents trends in patent application filings and grants at the IP5 Offices only, including also some breakdowns by technologies. While in Chapter 3 the latest data lag by one year, most of the information that appears here includes data for last year[39]. The patent office statistics for Europe in this chapter are for the EPO only and do not include statistics from the EPC states' national offices. Whereas the EPO is indicated from the viewpoint of an office, the EPC states are still indicated as a bloc of origin.

The activities at the IP5 Offices are demonstrated by counts of the patent applications that were filed. For patent applications, the representations are analogous to those appearing in Chapter 3 (Figs. 3.5, 3.6, 3.7, and 3.14) which show the numbers of requests for patents as patent applications[40]. Direct applications to the offices are counted at the date of filing. PCT applications are counted at the moment they enter the national or regional phase. Direct national and direct regional filings are counted only once. PCT national/regional phase filings are replicated over the numbers of procedures that are started.

The demand at the EPO is given in terms of applications rather than in terms of designations.

For granted patents, the statistics combine information by office and bloc of origin, displaying comparisons by year of grant. The representations here are similar to those for Figure 3.11, where granted patents are counted only once, except that, for EPC states, only the EPO is considered as the granting authority. Hereinafter, "patent grants" will signify the number of grant actions (issuances or publications) by the IP5 Offices.

For information about specific terminology and associated definitions used in Chapter 4, please refer to Annex 2.

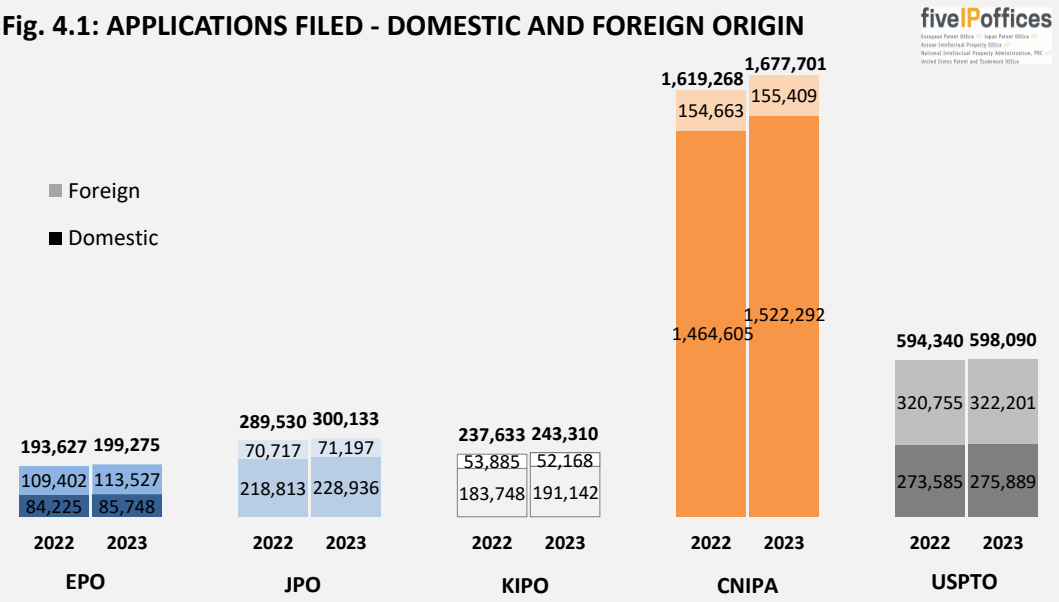
[39] The statistical tables file found in the web version of this report includes extended time series for much of the data included in this chapter. www.fiveipoffices.org/statistics/statisticsreports.
[40] See the section "Guide to figures in Chapter 3" at the beginning of Chapter 3.

PATENT APPLICATIONS FILED

ORIGIN

Figure 4.1 shows the number of patent applications that were filed at each of the IP5 Offices during the two most recent years, broken down by domestic and foreign origin (based on the residence of first-named applicants or inventors). For the EPO, domestic applications correspond to those filed by residents of the EPC states.

Fig. 4.1: APPLICATIONS FILED - DOMESTIC AND FOREIGN ORIGIN



In 2023, a total of 3,018,509 patent applications were filed at the IP5 Offices, an increase of 3 percent from 2022 (2,934,398).

Patent applications increased by 3 percent at the EPO, 4 percent at the JPO and CNIPA, 2 percent at the KIPO and 1 percent at the USPTO.

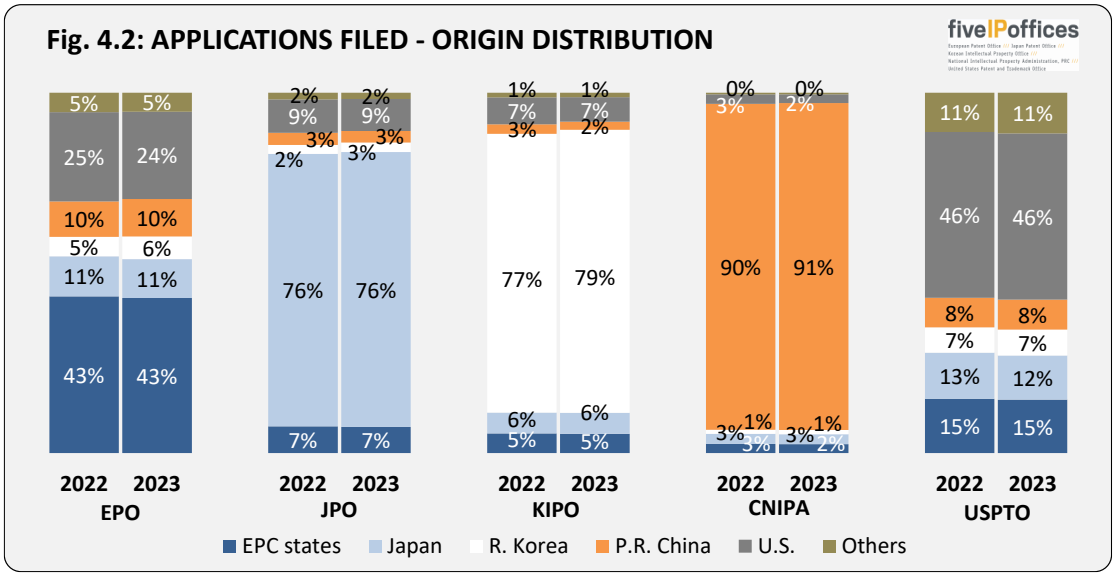
While domestic applications increased at the EPO, JPO, KIPO, CNIPA and USPTO by 2, 5, 4, 4, and 1 percent respectively. Foreign applications increased at the EPO, the JPO, and increased less than 1 percent at the CNIPA and the USPTO, while they decreased at the KIPO.

Table 4.1 shows the number of patent application filings by origin (residence of first-named applicants or inventors) relative to total filings at each office for 2023.

Table 4.1: 2023 APPLICATIONS FILED – ORIGIN

Office Origin	EPO	JPO	KIPO	CNIPA	USPTO	Total
EPC States	85,748	21,772	13,011	41,783	88,696	251,010
Japan	21,520	228,936	14,192	46,236	73,236	384,120
R. Korea	12,575	7,920	191,142	20,016	43,253	274,906
P.R. China	20,735	9,612	5,455	1,522,292	49,721	1,607,815
U.S.	48,155	26,648	16,527	40,380	275,889	407,599
Others	10,542	5,245	2,983	6,994	67,295	93,059
Total	**199,275**	**300,133**	**243,310**	**1,677,701**	**598,090**	**3,018,509**

Figure 4.2 shows the respective shares of patent applications filings by origin (residence of the first-named applicant or inventor) relative to the total number of applications filed at each office, for 2022 and 2023.



The shares of patent application filings by bloc of origin vary between Offices, but are generally consistent for 2022 and 2023 within each Office.

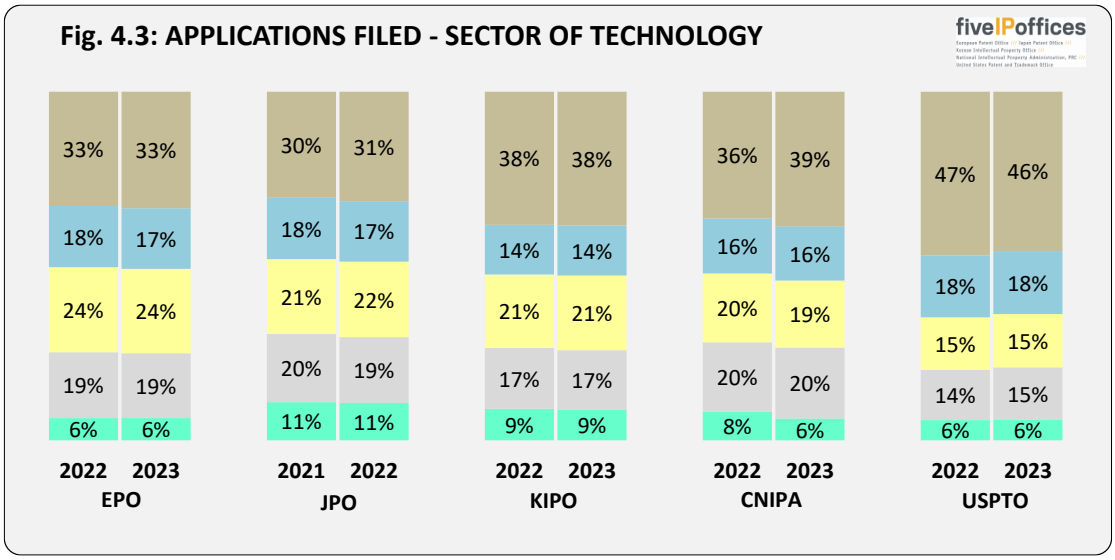
Caution should be used when comparing the numbers of applications between the IP5 Offices, due to the fact that the average number of claims contained in individual applications varies significantly. On average, in 2023, an application filed at the EPO contained 14.8 claims, (15.4 in 2022), while an application filed at the JPO contained an average of 11.9 claims (12.3 in 2022), and an application filed at the KIPO contained an average of 11.5 claims (11.6 in 2022). At the CNIPA, an application contained an average of 10.5 claims (10.4 in 2022), while one filed at the USPTO had 17.9 claims (18.0 in 2022) on average.

See the annexed statistical tables for longer trends.

SECTORS AND FIELDS OF TECHNOLOGY

Patents are classified by the IP5 Offices according to the IPC. This provides for a hierarchical system of language independent symbols for the classification of patents and utility models according to the different areas of technology to which they pertain. The WIPO established a concordance table to link the IPC symbols with thirty-five fields of technology grouped into five sectors[41]. Figure 4.3 shows the distribution of applications at each office according to the five main sectors of technology.

The classification takes place at a different stage of the procedure in the offices. As a result, data are shown for the EPO, the KIPO, the CNIPA, and the USPTO for the filing years 2022 and 2023, while for the JPO the breakdown is given for the filing years 2021 and 2022[42].



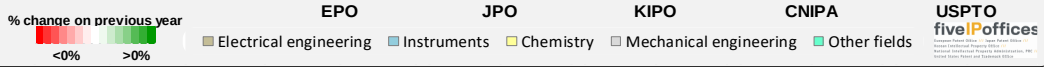
The Electrical engineering sector is more prominent at the USPTO than in the other IP5 Offices. A higher proportion of applications are filed in the Chemistry sector at the EPO than in the other IP5 Offices. At each office, the distribution between sectors of technology was fairly stable between the two years reported. On the longer term, there are some slow variations that can be seen in the statistical annex.

Figure 4.4 describes the distribution of the 2023[43] applications by the more detailed fields of technology at each office (left column for each IP5 Office), and the change in application counts compared to 2022 (right column). Actual shares and percentage changes in application counts are shown for the top 10 leading fields at each Office. The distribution of applications is represented by a color scale: the darker the shade of a color, the greater the share. The extent of change is reflected by a red–to-green color scale, the dark red indicates a marked decrease and dark green indicates a marked increase.

[41] www.wipo.int/meetings/en/doc_details.jsp?doc_id=117672
www.wipo.int/export/sites/www/ipstats/en/statistics/patents/xls/ipc_technology.xls
[42] JPO data are delayed by 1 year because the IPC assignment is completed just before the publication of the Unexamined Patent Application Gazette (18 months after the first filing).
[43] In the case of JPO data for 2021 are reported and compared to data for 2020.

Fig. 4.4: DISTRIBUTION OF APPLICATIONS FILED BY FIELD OF TECHNOLOGY - 2023

Field of technology	EPO		JPO		KIPO		CNIPA		USPTO	
	Share	Change	Share	Change	Share	Change	Share	Change	Share	Change
1. Electrical machinery, apparatus, energy	8%	+12%	9%	+2%	9%	+9%	7%	+1%	6%	+4%
2. Audio-visual technology			4%	+1%		-7%			4%	-2%
3. Telecommunications										
4. Digital communication	9%	+9%			5%	+6%	5%	+3%	9%	-1%
5. Basic communication processes										
6. Computer technology	8%	+1%	6%	+1%	7%	+5%	16%	+4%	15%	0%
7. IT methods for management			4%	+5%	6%	-8%	3%	+2%	4%	-3%
8. Semiconductors			4%	+6%	6%	+9%			4%	-19%
9. Optics			4%	+2%						
10. Measurement	5%	+3%	5%	-3%	5%	+8%	8%	+2%	4%	+2%
11. Analysis of biological materials										
12. Control										
13. Medical technology	8%	+1%	6%	0%	5%	+1%		-20%	8%	+3%
14. Organic fine chemistry	3%	+4%								
15. Biotechnology	4%	+6%								
16. Pharmaceuticals	5%	-3%							3%	-2%
17. Macromolecular chemistry, polymers										
18. Food chemistry										
19. Basic materials chemistry										
20. Materials, metallurgy										
21. Surface technology, coating										
22. Micro-structural and nano-technology										
23. Chemical engineering							4%	-1%		
24. Environmental technology										
25. Handling										
26. Machine tools							4%	+1%		
27. Engines, pumps, turbines										
28. Textile and paper machines										
29. Other special machines	3%	+1%			3%		3%			
30. Thermal processes and apparatus										
31. Mechanical elements										
32. Transport	5%	0%	4%	-6%	5%	-3%	4%	+3%	5%	+5%
33. Furniture, games			6%	+2%						
34. Other consumer goods										
35. Civil engineering					4%	+5%	4%	-1%		



Four fields are leading fields at all the IP5 Offices: *1. Electrical machinery, apparatus, energy*; *6. Computer technology*; *10. Measurement and 32 Transport*.

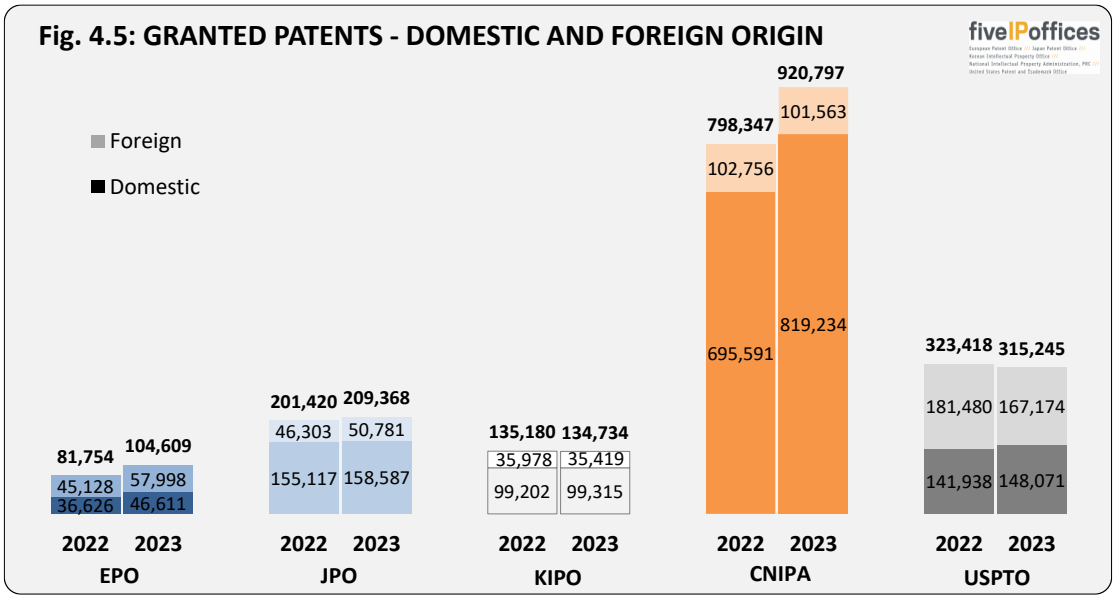
Six of the leading fields at the USPTO, five of the leading fields at the JPO and the KIPO, and four of the leading fields at the CNIPA are related to the Electrical engineering sector (1 to 8). At the JPO, the KIPO and the USPTO, most of leading fields are related to the Electrical engineering sector (1 to 8) or to Instruments sector (9 to 13). At the CNIPA and the EPO, the leading fields are more spread between sectors.

The highest shares in a field can be found in *6. Computer technology* receiving 16 percent and 15 percent of all applications at the CNIPA and the USPTO.

GRANTED PATENTS

ORIGIN

Figure 4.5 shows the numbers of granted patents by the IP5 Offices, according to the bloc of origin (residence of first-named owner or inventor).



Together the IP5 Offices granted a total of 1,684,753 patents in 2023. This was 144,634 more than in 2022 and represents an increase of 9 percent.

The numbers of granted patents increased in 2023 at the EPO, the JPO, and the CNIPA by 28 percent, 4 percent and 15 percent, respectively. In contrast, the number of granted patents decreased at the USPTO by 3 percent and decreased less than 1 percent at the KIPO.

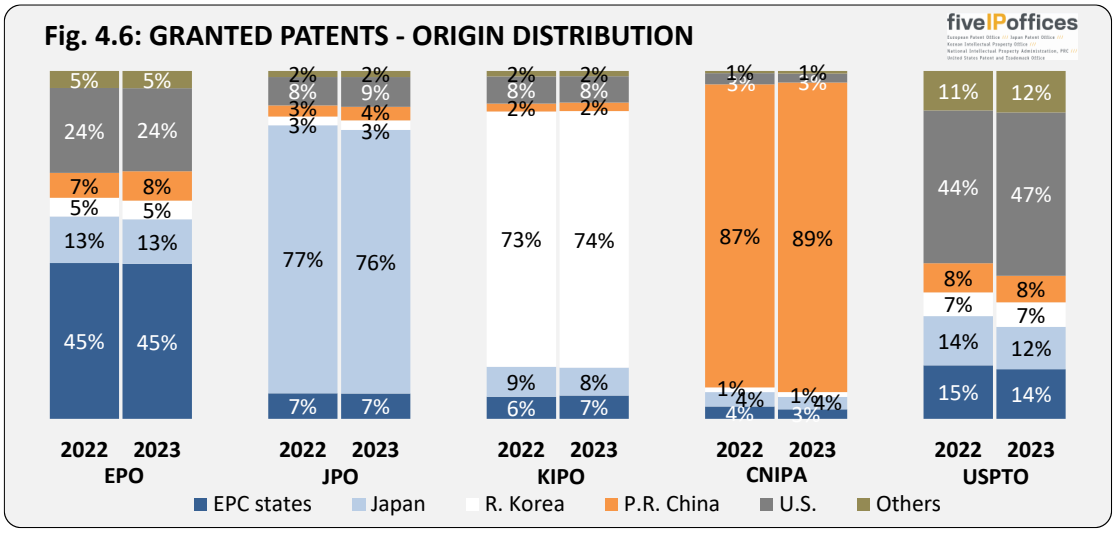
The differences between the IP5 Offices regarding the absolute numbers of granted patents can only be partly explained by differences in the numbers of corresponding applications. These numbers are also affected by differing grant rates and durations to process applications by the IP5 Offices (see the section below "Statistics on Procedures").

Table 4.2 shows the number of granted patents by origin (residence of first-named owner or inventor) at each office for 2023.

Table 4.2: 2023 GRANTED PATENTS – ORIGIN

Office / Origin	EPO	JPO	KIPO	CNIPA	USPTO	Total
EPC States	46,611	15,322	9,058	25,175	44,984	141,150
Japan	13,416	158,587	10,805	32,929	38,490	254,227
R. Korea	5,581	5,717	99,315	12,623	22,081	145,317
P.R. China	8,821	8,192	3,273	819,234	24,044	863,564
U.S.	24,974	17,822	10,236	24,005	148,071	225,108
Others	5,206	3,728	2,047	6,831	37,575	55,387
Total	**104,609**	**209,368**	**134,734**	**920,797**	**315,245**	**1,684,753**

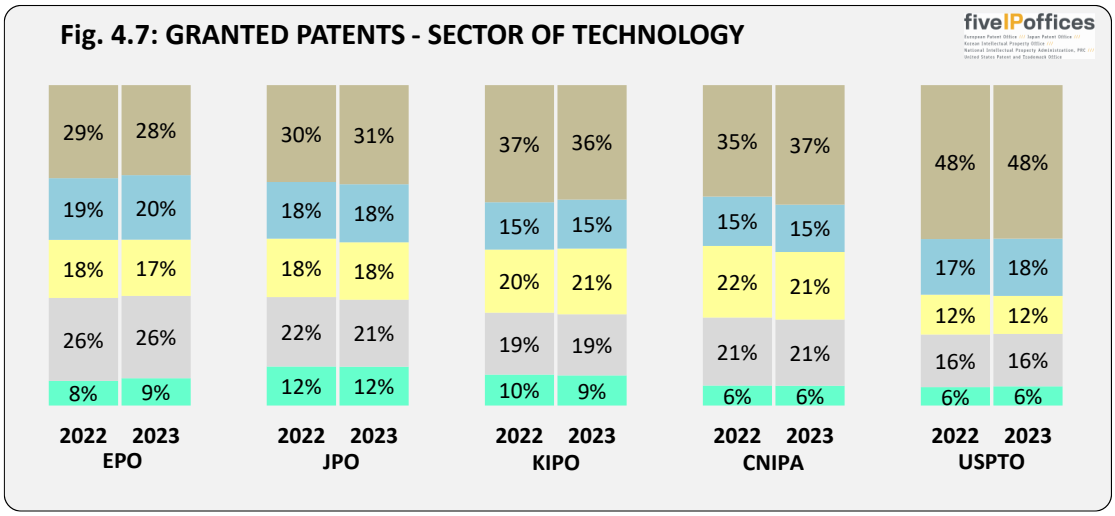
Figure 4.6 shows the shares of granted patents by origin (residence of first-named owner or inventor) at each office for 2022 and 2023.



At all offices, the distribution of granted patents is comparable to the distribution of applications that is shown in Figure 4.2.

SECTORS AND FIELDS OF TECHNOLOGY

Figure 4.7 shows the distribution of the granted patents in 2022 and 2023 at each office according to the five main sectors of technology.



The distribution of granted patents by sectors is fairly consistent with that shown in Figure 4.3 for applications. For example, at the EPO, the share of Chemistry in granted patents is lower than the share in applications, and the share of Mechanical engineering is higher than in applications.

Figure 4.8 describes the distribution of the 2023 granted patents by the more detailed fields of technology at each office (left column for each IP5 Office), and the change in granted patents counts compared to 2022 (right column). Actual shares and percentage changes in patent counts are shown for the top 10 leading fields at each Office. The distribution of applications is represented by a color scale: the darker the shade of a color, the greater the share. The extent of change is reflected by a red–to-green color scale, the dark red indicates a marked decrease and dark green indicates a marked increase.

Fig. 4.8: DISTRIBUTION OF GRANTED PATENTS BY FIELD OF TECHNOLOGY - 2023

Field of technology	EPO		JPO		KIPO		CNIPA		USPTO	
	Share	Change	Share	Change	Share	Change	Share	Change	Share	Change
1. Electrical machinery, apparatus, energy	6%	+10%	9%	0%	8%	+11%	6%	+6%	6%	-11%
2. Audio-visual technology				+13%	4%	+1%			5%	-13%
3. Telecommunications										-13%
4. Digital communication	8%	+27%		+9%	4%	-18%	6%	-2%	10%	0%
5. Basic communication processes										
6. Computer technology	7%	+33%	6%	+9%	7%	-7%	16%	+50%	16%	-12%
7. IT methods for management					5%	+3%			3%	
8. Semiconductors			4%	+4%	7%	-6%			5%	-6%
9. Optics			4%	+4%					3%	-9%
10. Measurement	6%	+29%	5%	+6%	4%	+12%	7%	+20%	5%	-7%
11. Analysis of biological materials										
12. Control										
13. Medical technology	9%	+40%	6%	+7%	5%	+2%			7%	-4%
14. Organic fine chemistry										
15. Biotechnology										
16. Pharmaceuticals										
17. Macromolecular chemistry, polymers										
18. Food chemistry										
19. Basic materials chemistry										
20. Materials, metallurgy								-5%		
21. Surface technology, coating										
22. Micro-structural and nano-technology										
23. Chemical engineering							4%	+18%		
24. Environmental technology										
25. Handling	3%		4%				3%			
26. Machine tools							4%	+18%		
27. Engines, pumps, turbines	3%	+20%								
28. Textile and paper machines										
29. Other special machines	4%	+40%					4%	+9%		
30. Thermal processes and apparatus										
31. Mechanical elements		+22%								
32. Transport	7%	+19%	5%	+3%	5%	+5%	4%	+7%	5%	-3%
33. Furniture, games			7%	+5%						
34. Other consumer goods										
35. Civil engineering	4%	+43%	4%		4%	-1%	4%	+18%		
	EPO		JPO		KIPO		CNIPA		USPTO	

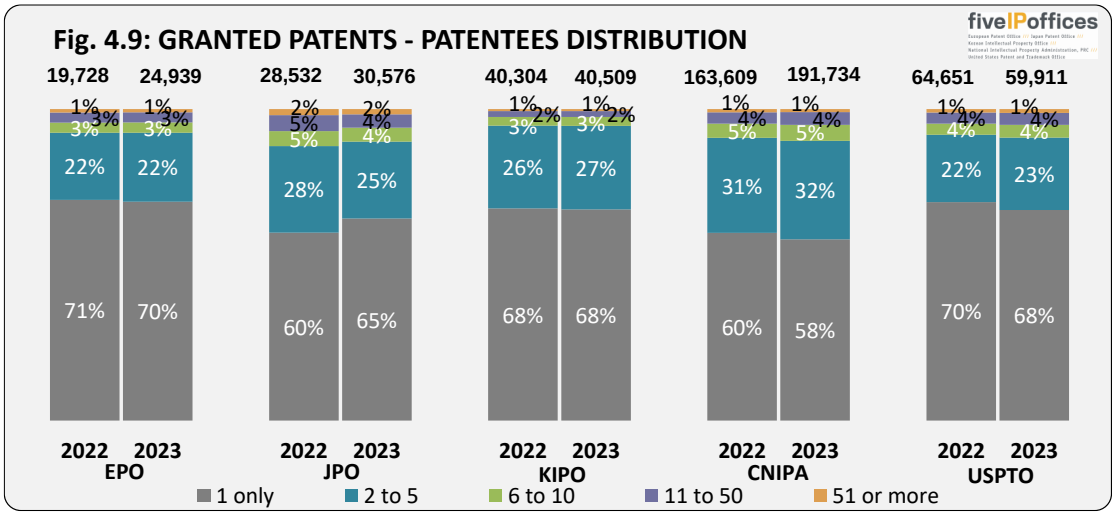
% change on previous year
<0% >0%

Electrical engineering | Instruments | Chemistry | Mechanical engineering | Other fields

fiveIPoffices

In 2023, *1. Electrical machinery, apparatus, energy*; *6. Computer technology*; *10. Measurement*; and *32. Transport* were leading fields in all IP5 Offices in granted patents. At the EPO, *25. Handling, 27. Engines, pumps, turbines* and *35. Civil engineering* are leading fields in granted patents but not in applications. At the JPO, *25. Handling* and *35. Civil engineering* are leading fields in granted patents but not in applications. At the KIPO, *2. Audio-visual technology* is a leading field in granted patents but not in applications. At the CNIPA, *25. Handling* is a leading field in granted patents but not in applications. At the USPTO, *9. Optics* is leading field in granted patents but not in applications. There was a large increase in granted patents in *6. Computer technology* and *10. Measurement* at the CNIPA.

Figure 4.9 shows the breakdown of patentees by their numbers of granted patents in 2022 and 2023.



This diagram shows that the distribution of grants to patentees is similar at each office in that it is highly skewed at all of them, because there are many more grantees that receive low numbers of grants rather than high numbers of grants. The proportions are generally consistent between 2022 and 2023 for each office. See the annexed statistical tables for longer term trends. These distributions are stable over the period.

At the CNIPA there is a slightly higher share of the “2 to 5” category than at the other IP5 Offices.

Most of the patentees received only one grant in a year. In 2023, the proportion was between 58 percent (CNIPA) and 70 percent (EPO). The proportion of patentees that received less than six patents was between 89 percent for the JPO and 95 percent for the KIPO. The proportion of patentees receiving 11 or more patents was higher at the JPO (6 percent) than at the USPTO (5 percent), at the EPO (4 percent), at the CNIPA (5 percent), and at the KIPO (3 percent).

In 2023, the average number of granted patents received remained unchanged for most offices when comparing 2023 to 2022. The numbers were four for the EPO, seven at the JPO, three at the KIPO, five at the CNIPA, and five at the USPTO. The greatest number of patents granted to a single applicant was 2,317 at the EPO, 3,487 at the JPO, 6,038 at the KIPO, 4,529 at the CNIPA, and 9,495 at the USPTO. This maximum number for 2023 was larger than for 2022 at the USPTO.

MAINTENANCE

A patent is enforceable for a fixed term that depends on actions taken by the owner. In the IP5 Offices, the maximum term is usually twenty years from the date of filing the application. In order to maintain protection during this period, the applicant has to pay what are variously known as renewal, annual or maintenance fees in the countries for which the protection pertains. Maintenance systems differ from country to country. In most jurisdictions, including those of the IP5 Offices, protection expires if a renewal fee is not paid in due time.

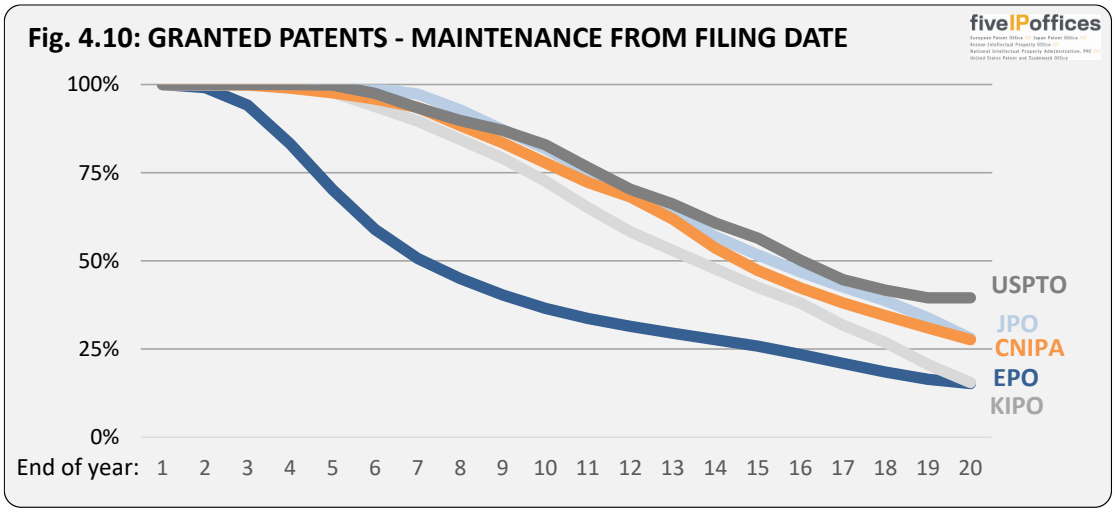
At the EPO, annual renewal fees are payable at the beginning of the year from the third year after filing in order to maintain the application. After the patent has been granted, renewal fees are then paid to the national office of each designated EPC contracting state in which the patent has been registered. These national patents can be maintained for different periods in the contracting states. Therefore, rather than maintaining one patent after grant, patentees have to deal with the maintenance of several patents and need to choose how long to maintain each one.

For a Japanese or Korean patent, the annual fees for the first three years after patent registration are paid as a lump-sum and for subsequent years there are annual fees. The applicant can pay either yearly or in advance.

At the CNIPA, the annual fee for the year in which the patent right is granted is paid at the time of going through the formalities of registration, and the subsequent annual fees are paid before the expiration of the preceding year. The date at which the time limit for payment expires is the date of the current year corresponding to the filing date.

The USPTO collects maintenance fees at 3.5, 7.5, and 11.5 years after the date of grant and does not collect an annually payable maintenance fee.

Figure 4.10 shows the proportions of granted patents by each office that are maintained for differing lengths of time. It compares the rate of granted patent registrations existing and in force each patent year starting with the year of application. Figures are based on the most recent relevant data that are available at each IP5 Office. The EPO proportion represents a weighted average ratio of the maintenance of the validated European patents in the 39 EPC states[44].



At the USPTO, 40 percent of the granted patents are maintained for a full 20 years from filing. This is compared to 28 percent at both the JPO and the CNIPA and 15 percent at both the EPO and the KIPO.

More than 50 percent of the USPTO granted patents are maintained for at least 16 years, compared to 15 years at the JPO, 14 years at the CNIPA, 13 years at the KIPO, and 7 years at the EPO.

In addition to patentees' behaviour, these differences can be partly explained by differences in the procedures, such as a multinational maintenance system (EPO), deferred examination (JPO, KIPO, CNIPA) and a stepped maintenance payment schedule (USPTO). Changes in patent laws and administrative processes also may have some effect on maintenance rates.

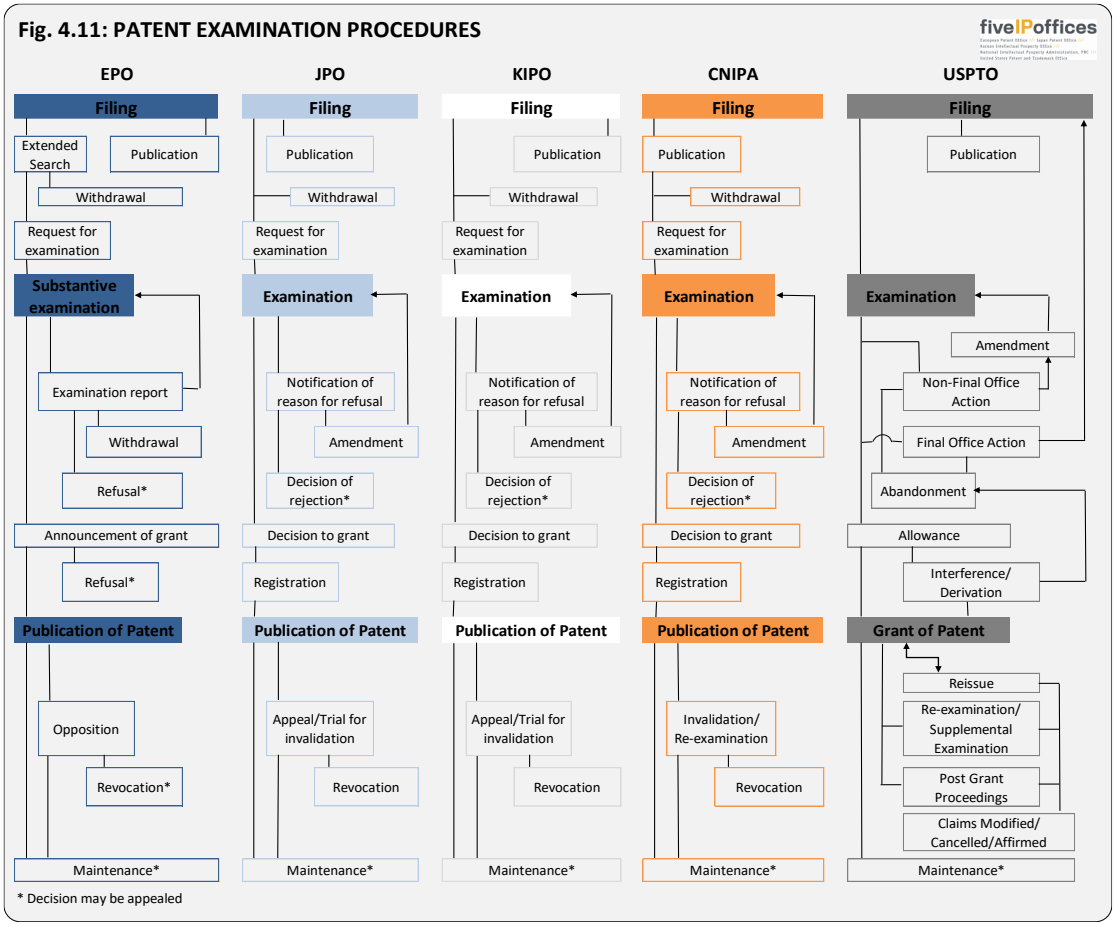
[44] Once granted by the EPO, European patents need to be validated to come into force in the various member states that are designated at the time of grant.

PATENT EXAMINATION PROCEDURES

PROCEDURE FLOW CHART

Figure 4.11 is a simplified view of the major phases of the procedures at the IP5 Offices and concentrates on the similarities between offices to motivate the comparative statistics to be presented in Table 4.3. However, the reader should bear in mind when interpreting such statistics that details of the procedures differ between offices, sometimes to quite a large degree (e.g. in time lags between stages of the procedures).

Fig. 4.11: PATENT EXAMINATION PROCEDURES



See Annex 2 for some further details about the procedures.

Fees are due at different stages of the procedure. Information on main comparable fees at the IP5 Offices is made available online on the IP5 home page[45].

[45] See www.fiveipoffices.org/statistics/statisticaldata under fees. These data are not guaranteed to be entirely accurate or up to date. Official fee schedule information and associated regulations from each IP5 Office take precedence.

STATISTICS ON THE PROCEDURES

Table 4.3 shows various statistics as average rates and numbers where applicable for 2022 and 2023. Definitions of the various terms are given in Annex 2.

Details on the definition of the terms presented in Table 4.3 can found in Annex 2. In the following cases, there exist some differences between the offices:

- Pending examination: For the KIPO, only the unexamined patent applications with a request for examination filed have been counted. In the reports prior to the 2016 edition, the figure of this category included the entire unexamined patent applications.

- Pendency first office action: For the EPO the measurement begins at the date of initial filing and ends upon completion of either the extended European search report that includes a written opinion on patentability or, in the case of a PCT without supplementary search, the international search report with a written opinion. The JPO, the KIPO, and the CNIPA measure from the request for examination. Rather than measuring average pendency, in 2021 the USPTO has transitioned to a compliance rate based on compliance with a 14-month goal between filing and the mailing of the first office action, in accordance with its statutory mandate.

- Pendency final action: The pendency in examination is calculated from the date at which the file was allocated for examination (EPO, usually 6 months after the first action), the date of the request for examination (JPO, KIPO), the date on which the application enters the substantive examination phase (CNIPA). Rather than measuring average pendency, in 2021 the USPTO has transitioned to a compliance rate based compliance with a 36 month goal between filing and mailing of a final office action, in accordance with its statutory mandate.

Note: The length of time until request for examination can vary, this leads to significant differences between offices in the time periods that are reported.

Table 4.3: STATISTICS ON THE PROCEDURES

Definitions of the various terms are given in Annex 2.

Progress in the procedure Rates in percentage	Year	EPO	JPO	KIPO	CNIPA	USPTO
Examination	2022	95.2	74.7	85.5	n.a	100.0
	2023	88.2	74.8	86.4	n.a.	100.0
Grant	2022	59.9	75.9	74.3	51.1	69.1
	2023	64.3	75.9	72.9	51.9	81.8
Opposition	2022	2.4	0.7	-	n.a	n.a
	2023	2.4	0.7	-	n.a	n.a
Appeal on examination	2022	11.6	33.9	3.8	n.a	1.4
	2023	9.8	35.2	3.8	n.a.	1.4
Pendency	**Year**	**EPO**	**JPO**	**KIPO**	**CNIPA**	**USPTO**
Awaiting request for examination	2022	110,022	534,292	189,300	n.a	-
	2023	150,669	531,532	194,124	n.a	-
Pending examinations	2022	394,458	171,645	275,070	2,728,640	715,979
	2023	400,604	163,200	290,600	2,739,000	771,398
Pendency first action (months)	2022	4.9	10.1	14.3	13.0	n.a
	2023	5.0	9.5	16.1	13.2	n.a
Pendency final action (months)	2022	24.3	14.9	18.4	16.5	n.a
	2023	24.9	14.0	20.1	16.0	n.a
Pendency invalidaiton (months)	2022	-	13.4	-	5.7	-
	2023	-	13.9	-	n.a.	-

n.a = not available; - not applicable

RATES

The examination rate at the USPTO is 100 percent, since filing a non-provisional patent application at the USPTO implies a request for examination, whereas at the EPO, the JPO, the KIPO, and the CNIPA a specific request for examination has to be made. At the EPO, a large proportion of PCT applications in the granting procedure give a high examination rate, as almost all of them proceed to examination. The examination rate is somewhat lower at the JPO and the KIPO since the deferred examination system allows more time for the applicants to evaluate whether or not to proceed further with the application.

The grant rates at the EPO, the CNIPA and the USPTO increased between 2022 and 2023. The grant rates at the JPO stayed about the same as in 2022. At the KIPO the grant rate decreased between 2022 and 2023.

The appeal on examination rates vary between offices, mainly due to the differing procedures.

PENDENCIES

In the successive stages of the procedure, there are pending applications awaiting action in the next step of the procedure. The number of pending applications gives an indication of the workload (per stage of procedure) from the patent grant procedure in each of the IP5 Offices. Although this may seem to be an indicator for the backlog in handling applications within the offices, it is not in fact a particularly good one because substantial parts of pending applications are awaiting action from the applicant. This could be, for instance, a request for examination or a response to actions communicated by the office.

As shown in Table 4.3, about 5.2 million applications were pending (i.e. awaiting request for examination or pending examination) in the IP5 Offices at the end of 2023.

The total number of applications pending at the IP5 Offices increased by 2.4 percent between 2022 and 2023. Pending applications decreased at the JPO, and increased at the EPO, the KIPO, the CNIPA and the USPTO between 2022 and 2023.

The pendency to first action increased at the EPO, the KIPO, the CNIPA while it decreased at the JPO. The pendency to final action increased at the EPO and the KIPO, and decreased at the CNIPA and the JPO.

These numbers should not be compared between offices, because of the differences in the procedures at each office, as well as different portions of the procedures being measured. At the EPO, for example, the examination is done in two phases: a search and a substantive examination, while they are done in one combined phase at the other IP5 Offices.

Unlike the other IP5 offices, the USPTO does not have a request for examination step. As a result, the USPTO does not have pendency metrics that would be comparable to the other IP5 offices. See Fig 4.12 below and Annex 2 for further explanation.

At all IP5 Offices, various options to initiate a faster examination are available.

Fig. 4.12: OFFICES PROCESS TO FIRST AND FINAL ACTIONS

Action	Office	Filing	Formalities	Search Report as 1st Action*	Request for examination	1st Examiner Action	Grant/Abandonment Decision		Remarks
1st action									
	EPO	→		5.0					Standard EP cases (i.e. excl. non-unity, clarification req, incomplete search)
	JPO				→	9.5			
	KIPO				→	16.1			
	CNIPA				→	13.2			If qualified, CNIPA issues a notification that the patent application is entering substantive examination stage
	USPTO	→				20.3			
Final action									
	EPO				→		24.9	Grant	Standard cases (i.e. excl. late payment, req for time extension, reschuled oral proc.)
	JPO				→		14.0	Grant/Aband.	Standard cases (i.e. excl. 2nd notif for refusal, req for time extenson…)
	KIPO				→		20.1	Grant/Aband.	
	CNIPA				→		16.0	Grant	If qualified, CNIPA issues a notification that the patent application is entering substantive examination stage
	USPTO	→					24.8	Grant/Aband.	

1st action: *1st communication on prior art and opinion on patentablity*
Final action: *Examiner decision to grant (or refuse) the granting of a patent*

Time limit to request examination

EPO	up to 6 months after publication of the search report, or up to 31 months from priority/international filing date for PCT application
JPO	up to 3 years after fiing date at JPO
KIPO	up to 3 years after fiing date at KIPO
CNIPA	up to 3 years after fiing date at CNIPA
USPTO	no delay, filing = request for examination

** EPO only*

Chapter 5

THE IP5 OFFICES AND THE PATENT COOPERATION TREATY (PCT)

This chapter presents firstly the impact of the PCT system on global patenting activity. Then it describes the various activities of the IP5 Offices that relate to the PCT system.

Graphs are presented that display the shares that used the PCT, by origin, of patent applications, grants and patent families. Descriptions are given of additional activities of the IP5 Offices under the PCT as RO for applicants in their respective territories, as ISA and as IPEA. PCT searches are a significant workload for the IP5 Offices in addition to those already described in Chapter 4.

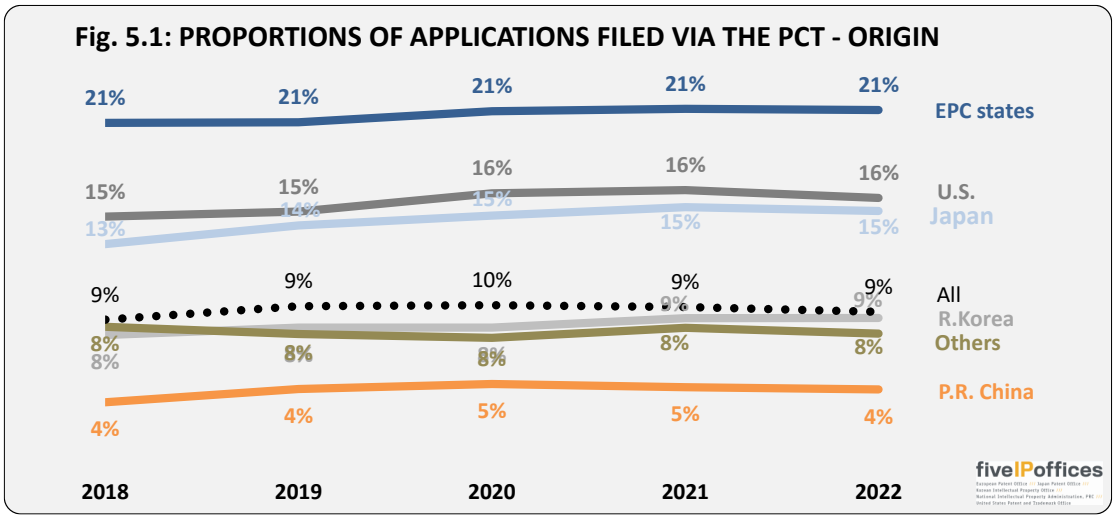
Statistics in this chapter have been derived from the WIPO Statistics Database[46] and the IP5 Offices. The graphs cover five-year periods that include the latest year for which reliable data are available[47]. Data for 2023 are presented in all figures except for Figure 5.1 (proportions of applications filed by PCT) and Figure 5.6 (IP5 patent families by origin).

[46] This edition refers to general patent data as of April 2023, and to PCT international application data as of June 2023, www.wipo.int/ipstats/en/index.html
[47] The statistical tables file found in the web version of this report includes extended time series for most of the data included in this chapter. www.fiveipoffices.org/statistics/statisticsreports

PCT AS FILING ROUTE

PATENT FILINGS

Figure 5.1 shows, for each bloc of origin (residence of first-named applicant or inventor), the proportions of all patent filings that are PCT international applications. Applications are counted in the year of filing. These data are comparable to those in Figs. 3.1 to 3.4.



9 percent of worldwide patent filings were made via the PCT route in 2022.

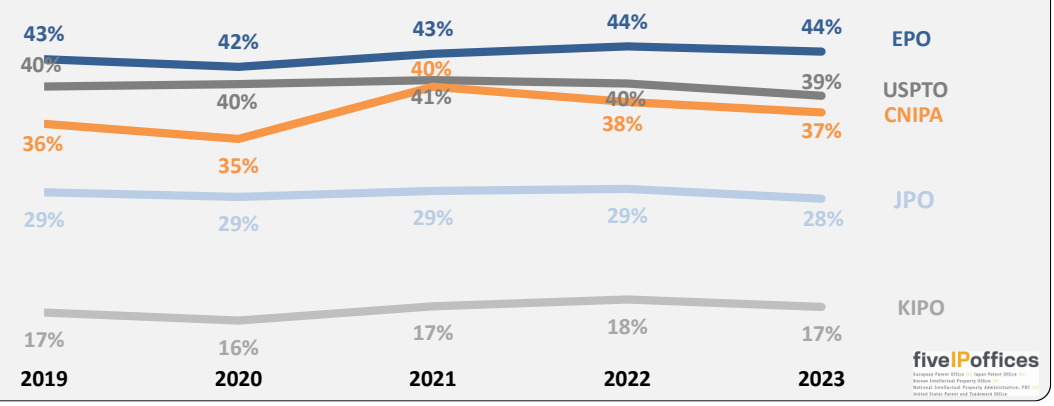
The proportion of applications filed via the PCT grew marginally over the period. It increased more for Japan and the U.S. The proportion for the EPC states origin applications continue to be higher than for the remaining blocs.

NATIONAL / REGIONAL PHASE ENTRY

After the international phase of the PCT procedure, applicants decide whether they wish to proceed further with their applications into the national or regional phase for each country or regional organization of interest. If the decision is made to proceed, then the applicant has to fulfil the various requirements of the selected PCT contracting states or organisations.

Figure 5.2 shows the proportions of international PCT applications that entered the national or regional phase at each of the IP5 Offices. Applications are counted in the year corresponding to the date when the delay to enter the national or regional phase has expired[48].

Fig. 5.2: PROPORTIONS OF PCT ENTERING NATIONAL/REGIONAL PHASE



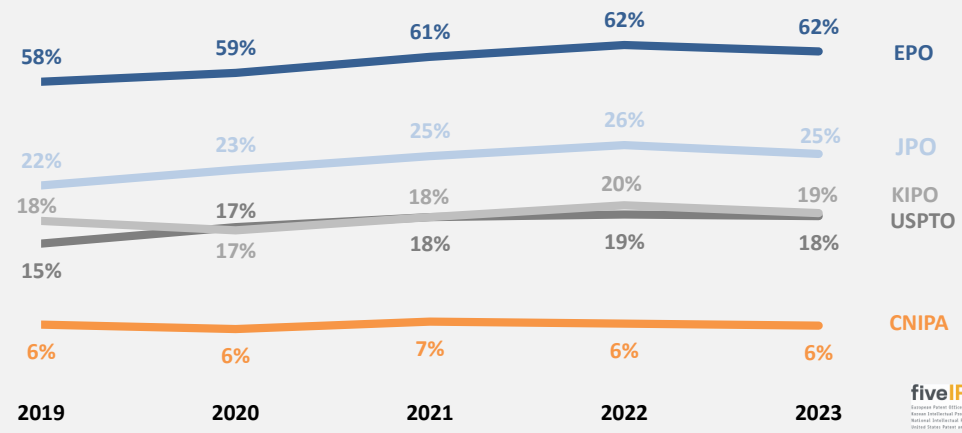
A lower proportion enters the regional phase at the KIPO and JPO than enters the national phase at any of the other IP5 Offices.

[48] It should be noted that counts from EPC contracting state national offices are not reported in Figs. 5.2, 5.3, and 5.4.

SHARE OF PCT APPLICATIONS

Figure 5.3 shows the shares of PCT among all applications in the grant procedure at each office (as presented earlier in Figure 4.1).

Fig. 5.3: PROPORTIONS OF PCT APPLICATIONS IN THE GRANT PROCEDURE

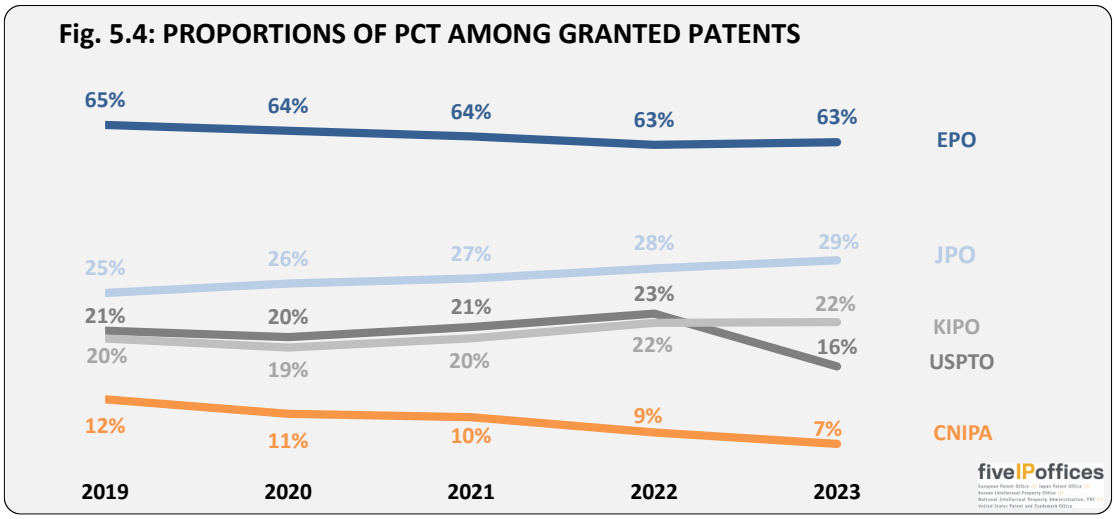


The proportions of PCT national/regional phase applications among all applications remained stable during the period. In 2023 the proportions decreased by 1 percent.

The EPO continues to have much higher proportion of PCT applications, compared to the other IP5 Offices. This can be explained by the fact that, contrary to other IP5 Offices, most of the first filings filed in the EPC states are filed at national offices, resulting in a higher share of PCT at the EPO.

PCT GRANTS

Figure 5.4 shows the proportions of granted patents by each of the IP5 Offices that were based on PCT applications.



Granted patents generally relate to applications that were filed several years earlier.

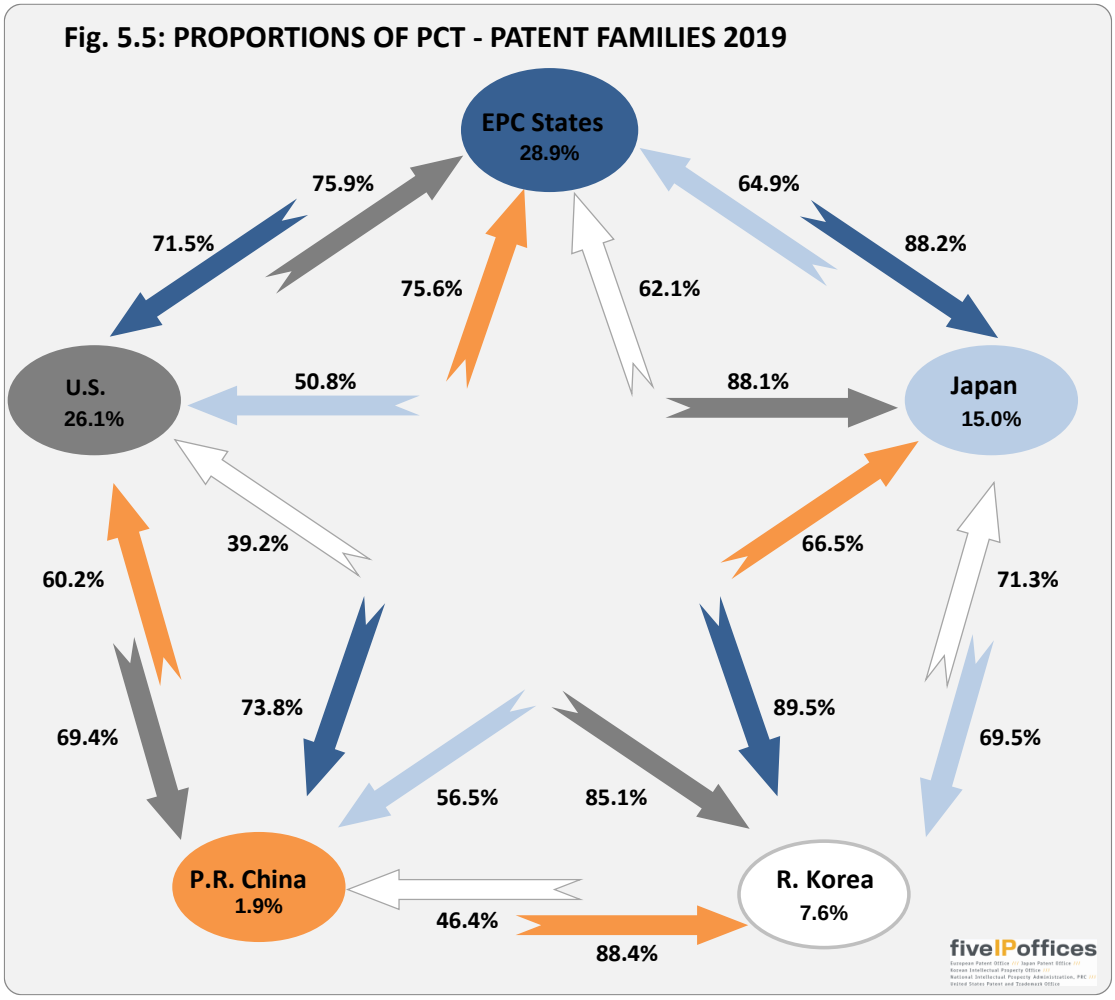
Over the period, the proportion of PCT in patent grants at the EPO, the USPTO, and at the CNIPA decreased, while the proportion increased at the JPO, the KIPO. The percentages of PCTs in patent grants in Figure 5.4 are always higher than the percentages of PCTs in applications in Figure 5.3, for all IP5 Offices except the USPTO in 2023. The difference is larger at the EPO.

PATENT FAMILIES AND PCT

A patent family is a group of patent filings that claim the priority of a single filing, as was described in the final section of Chapter 3.

The PCT system provides a good way to make subsequent patent applications in a large number of countries. Therefore, it can be expected that many patent families flowing between blocs use the PCT route. In this section, the usage of the PCT system implies that at least one PCT application has been made within the family of filings that quote the priority of the same first filing.

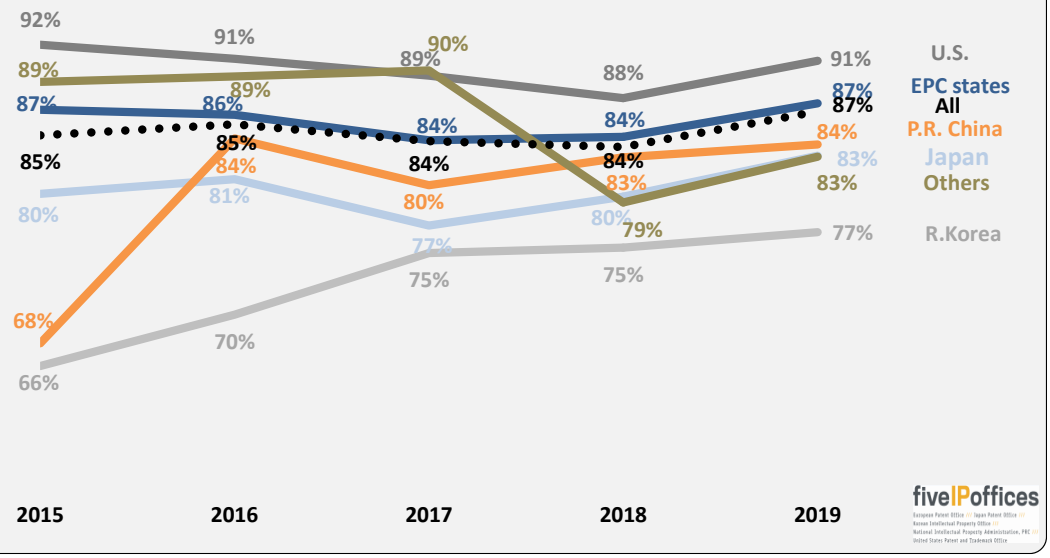
Figure 5.5 shows the usage of the PCT among patent families for the priority year 2019. Two types of percentages are shown. The first, next to the name of each bloc, is the proportion of the overall number of first filings for the bloc that generated families using the PCT. The second, next to the arrows indicating flows between-blocs, shows the share of total patent family flows that used the PCT system. This figure is based on first filings in 2019, and can be compared with Figure 3.14.



In general, the usage of the PCT route is far higher when making applications abroad rather than at home. Applicants from the U.S., P.R. China and the EPC states use the PCT system for their foreign filings to a greater extent than applicants from Japan and R. Korea do.
Figure 5.6 shows the proportions of IP5 patent families by bloc of origin (residence of first-named applicants or inventors), as given earlier in Figure 3.15, that made some

use of the PCT system. IP5 patent families correspond to filings where activities of the first and/or subsequent associated filings were made in all the IP5 Blocs.

Fig. 5.6: PROPORTIONS OF PCT IN IP5 PATENT FAMILIES BY ORIGIN



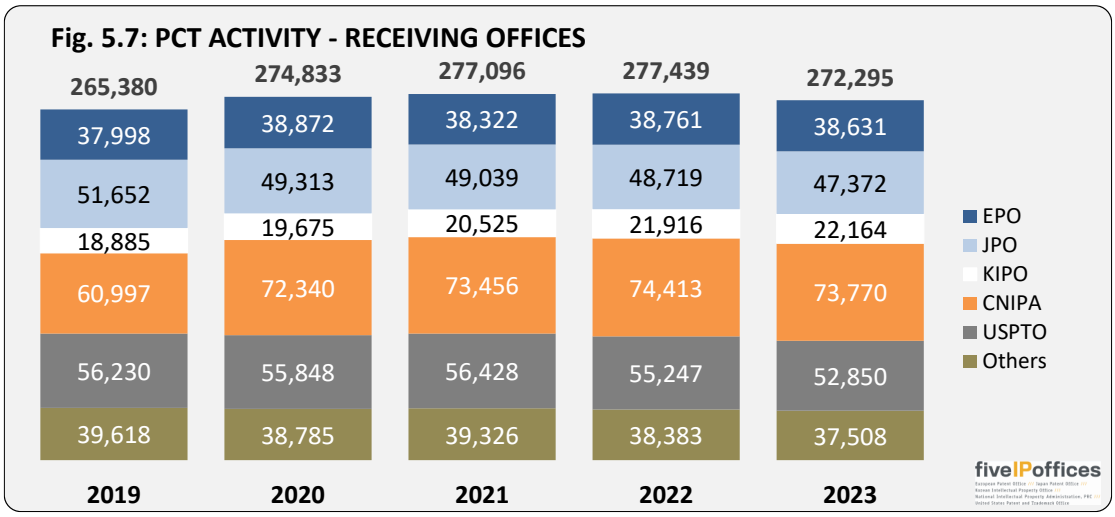
Since IP5 patent families represent highly internationalised applications, the rate of PCT usage is high compared to the overall usage of PCTs among applications in general, as was shown in Figure 5.1.

In 2019, there was a further increase of usage in R. Korea, reaching a level comparable to other blocs.

PCT AUTHORITIES

Under the PCT, each of the IP5 Offices acts as RO, mainly for applicants from its own geographical zone, and as ISA and IPEA for non-residents and residents. The following graphs show the trends from 2019 to 2023.

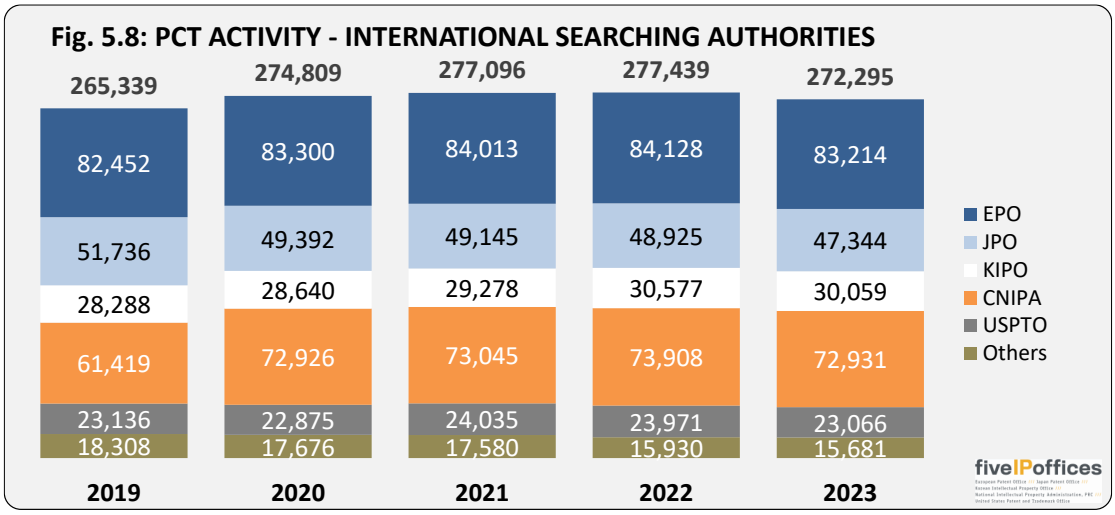
Figure 5.7 shows the breakdown of PCT international filings by ROs over time.



From 2019 to 2022, the total number of PCT international phase filings grew at average compound annual growth rate 1 percent.

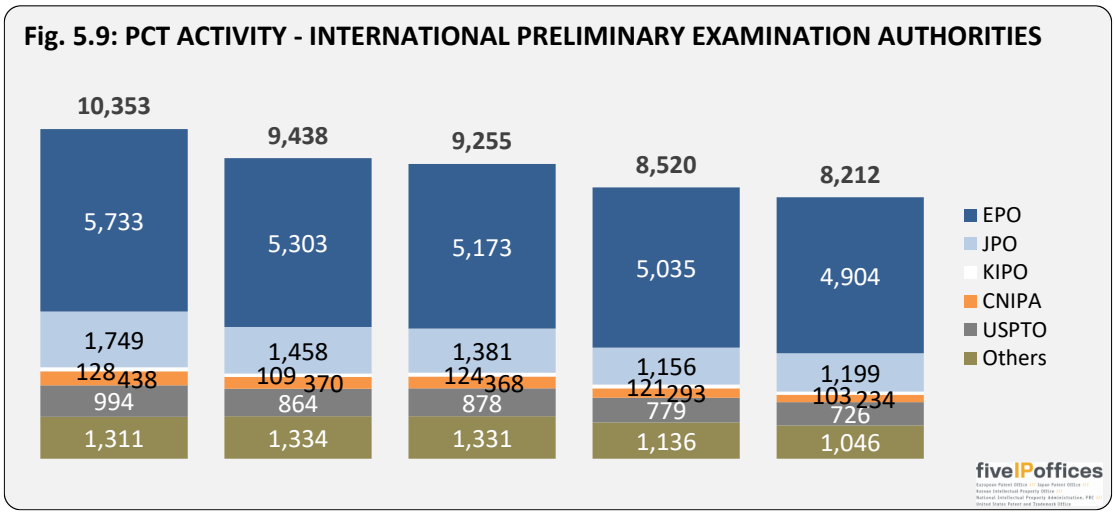
In 2023, the KIPO saw a 1 percent increase of PCT international filings compared with 2022. Together, the IP5 Offices were ROs for 86 percent of the PCT international filings in 2023 (85 percent in 2019).

Figure 5.8 shows the breakdown over time of the numbers of international search requests to offices as ISA, for those applications for which information is known.



There is a steady increase in total activity over the period described, while a slight decrease in 2023. In 2023, the IP5 Offices received 94 percent of all PCT international search requests, consistent with the previous periods. The EPO continues to receive the largest number of requests, receiving 31 percent of all requests in 2023. In 2023, the number of requests decreased at the EPO and the CNIPA by 1 percent, 3 percent at the JPO, 2 percent at the KIPO, 4 percent at the USPTO.

Figure 5.9 shows the breakdown over time of the numbers of international preliminary examination requests to IP5 Offices as IPEA.



From 2022 to 2023, the number of requests for international preliminary examinations decreased 4 percent. Since the changes in the PCT regulations[49] for the international preliminary examination, the number of requests is declining. Together, the IP5 Offices were in charge of 87 percent of the IPEA work in 2023. In 2023, the EPO performed 60 percent of all the international preliminary examinations.

[49] The number of international preliminary examination requests began to fall in 2003, following a change in the time limit which came into effect on April 1, 2002. For further details, please see: https://www.wipo.int/pct/en/faqs/article22_faq.html

Chapter 6
OTHER WORK

This brief chapter contains statistics about other work done on IP rights that is not common to all five offices. The data presented below supplement the information appearing in earlier chapters of this report.

This includes applications for plant patents (USPTO), reissue patents (USPTO), provisional applications (USPTO), applications for patents other than those for inventions: utility models (JPO, KIPO, CNIPA), designs (JPO, KIPO, CNIPA, USPTO), trademarks (JPO, KIPO, USPTO), and search requests to be performed on behalf of national offices (EPO).

The utility model is different from the patent for invention[50] because it is used to protect a device in relation to the shape or construction of articles or combination of articles (JPO, CNIPA), or to protect a creation of a technical idea using the rules of nature regarding the shape, structure, or combination of subjects (KIPO). A utility model is registered without a substantive examination as long as it meets basic requirements. The maximum period of protection for a utility model in Japan, R. Korea, and P.R. China is 10 years, which is shorter than for a patent for invention (typically 20 years).

A provisional application is an unexamined application which allows applicants to secure an early effective filing date without a formal patent claim, oath or declaration, or any information disclosure (prior art) statement.

The numbers of requests received for these types of other work are shown for 2022 and 2023 in Table 6.

Table 6: STATISTICS ON OTHER WORK

Activity	Year	EPO	JPO	KIPO	CNIPA	USPTO
Search for national offices	2022	29,128	-	-	-	-
	2023	27,161	-	-	-	-
Design applications	2022	-	31,711	56,641	794,718	53,094
	2023	-	31,747	55,335	820,361	56,225
Utility model applications	2022	-	4,513	3,084	2,950,653	-
	2023	-	4,949	2,746	3,063,928	-
Plant patent applications	2022	-	-	-	-	907
	2023	-	-	-	-	850
Re-issue applications	2022	-	-	-	-	739
	2023	-	-	-	-	807
Trademark applications	2022	-	170,275	259,078	7,515,961	762,611
	2023	-	164,061	255,209	7,188,336	742,155
Provisional applications	2022				-	146,593
	2023				-	149,643

In 2023, the number of utility model applications decreased by 11 percent at the KIPO, while they increased by 10 percent and 4 percent at the JPO and the CNIPA, respectively. The number of trademark applications decreased at the JPO, the KIPO,

[50] Not to be confused with the utility model, the USPTO's main type of patent, called a utility patent, is a patent for invention that is similar to the standard patent at the other IP5 Offices.

the CNIPA, and the USPTO by 4 percent, 1 percent, 4 percent, and 3 percent, respectively. For design applications, there were decreased by 2 percent at the KIPO, increased by 3 percent and 6 percent at the CNIPA and the USPTO, and slightly increased at the JPO.

Annex 1

DEFINITIONS FOR IP5 OFFICES EXPENDITURES

EPO EXPENDITURES (Figure 2.7)

The full costs are distributed to eight types of EPO products (labelled A to H in Figure 2.7). Of these, five types are directly related to processing of patent applications: filing, search, examination, opposition, and appeal. The other three types are related to different tasks performed by the EPO: patent information, technical cooperation and the European patent academy.

Direct costs immediately related to one product are entirely allocated to this product. The indirect costs are distributed to the products according to staff and usage keys, with IT costs being distributed according to their catalogue of services.

A-E. Business support and other indirect

- Salaries and allowances of the concerned permanent staff as well as temporary staff, including the yearly variation of liabilities for pensions, long-term care, death, sickness (“current service costs”), and partial tax compensation

- Training, recruitment, transfer and leaving costs, medical care, welfare of these staff

- Their share of depreciation for buildings, IT equipment and other tangible and intangible assets, including the depreciation component of financial leases

- Their share of operating costs related to the maintenance of electronic data processing hardware and software, licenses, programming costs of self-developed systems as far as they do not qualify for capitalization

- Their share of operating costs related to the maintenance of buildings, technical installations, equipment, furniture and vehicles, such as rent, cleaning and repairs, electricity, gas, water

- The relevant business support shared costs that mostly include management, human resources, finance, legal advice and communication functions

F. Patent information

This covers the publication of patent documentation, raw data products, public information, customer services, website, conference, exhibitions and fairs. The product lines bear the full cost of operating such activities.

G. Technical cooperation

Cooperation with contracting states including support to national patent offices, assistance to third countries, Trilateral and IP5 activities, EPOQUE Net. The product lines bear the full cost of operating such activities.

H. European patent academy

The product lines bear the full cost of operating such activities including professional representatives and European qualifying examination support, conference costs.

JPO EXPENDITURES (Figure 2.8)

Expenses for business processing

A. General processing work

- Existing personnel (including increase and transfer)
- General administration
- Various councils
- Encouragement of guidance including patent management
- External rented offices
- Internationalization of industrial property administration
- Project for supporting medium and small company's applications
- Patented micro-organisms deposition organization

B. Examination and appeals/trials, etc.

- Infrastructure improvement for examination and appeals/trials
- Disposition of examination and appeals/trials
- Execution of PCT

C. Information management

Management of information for use in examination and appeals/trials

D. Publication of Patent Gazette, etc.

E. Computers for patent processing work

F. Facility improvement

G. Operating subsidies for INPIT[51]

H. Others

All other expenses not covered by the above.

[51] National Center for Industrial Property Information and Training

KIPO EXPENDITURES (Figure 2.9)

A. Personnel resources

Compensation for the services of employees or the inclusive expenditure of the services of employees: salaries, bonuses, and remuneration of temporary staff.

B. Internal business

Internal business includes Public-employee pension, balance, and transaction between the accounts.

C. Primary business expenses

Primary business expenses include expenditures on the development, operation, and private transfer which mainly related to the business of private organizations or affiliated organizations, including expenses on the business and task.

D. Other expenses

All other expenses not covered by the above.

CNIPA EXPENDITURES (Figure 2.10)

A. Administrative Operation

B. Examination

- Patent examination
- Trademark examination

C. Social and Housing security, Pension

- Pension of staff in administrative agencies
- Infrastructure-related expenses.

D. Others

All other expenses not covered by the above.

USPTO EXPENDITURES (Figure 2.11)

A. Salaries and Benefits

Compensation directly related to duties performed for the Government by Federal civilian employees. Also included are benefits for currently employed Federal civilian personnel.

B. Equipment

C. Rent and Utilities

Payments for the use of land, structures, or equipment owned by others and charges for communication and utility services.

D. Printing

Costs incurred for printing and reproduction services including related composition and binding operation.

E. Other expenses

All other expenses not covered by the above (heading for equipment and printing are above) including but not limited to:

- Equipment: Property of a durable nature, which is defined as property that normally may be expected to have a period of service of a year or more, after being put into use, without material impairment of its physical condition or functional capacity. Also included is the initial installation of equipment when performed under contract.

- Printing: Printing and reproduction obtained from the private sector, or from other Federal entities.

- Supplies and Materials: Commodities that are ordinarily consumed or expended within one year after they are put into use, converted in the process of construction or manufacture, used to form a minor part of equipment or fixed property, or other property of little monetary value that does not meet any of the three criteria listed above, at the option of the agency.

Annex 2

DEFINITIONS OF TERMS AND STATISTICS ON PROCEDURES

This annex contains firstly definitions of the main terms used in the report[52]. After that there is an explanation of the patent procedures relating to Figure 4.9. Then finally there are definitions of the statistics on procedures that appear in Table 4.3.

DEFINITIONS OF TERMS

APPLICATIONS, COUNTING OF

Application counts are mainly determined by counting each national, regional or international application only once. However, alternative representations are also given in Chapter 3 after cumulating the number of designated countries over applications.

In this report, applications are counted in terms of patent filings, first filings, requests for patents entering a grant procedure, and demand for national patent rights.

- Counts of "*Patent filings*" include direct national, direct regional, and initial PCT international phase applications;
- Counts of "*First filings*" include initial patent applications filed prior to any later subsequent filings to extend the protection to other countries;
- Counts of "*Requests for patents entering a grant procedure*" include direct national, direct regional, national phase PCT, and regional phase PCT applications;
- Counts of "*Demands for national patent rights*" include direct national applications counted once each, designations in regional applications, national phase PCT applications, and designations in regional stage PCT applications.

These counting methods are used in various sections of the report, and particularly in Chapter 3. The methods are discussed in greater detail both at the beginning of Chapter 3 and at the beginning of the corresponding sections of Chapter 3.

BLOCS, GEOGRAPHIC

Six geographical blocs are defined in this report. The first five blocs, together, are referred to as the "*IP5 Blocs*". They are:

- The EPC contracting states (EPC states in this report) corresponding throughout the period covered in this report to the territory of all the states party to the EPC;
- Japan (Japan in this report);
- Republic of Korea (R. Korea in this report);
- People's Republic of China (P.R. China in this report);
- United States of America (U.S. in this report).

The remaining geographical areas are grouped together as:

- The rest of the world (Others in this report).

[52] A more extensive glossary of terms is available with the web-based version of the report.

These blocs are referred to as blocs of origin on the basis of the residence of the first-named applicants or inventors (throughout the report) or as filing blocs on the basis of the place where the patents are sought (in Chapters 3 and 5).

DEMANDS FOR PATENT RIGHTS

Demand for patent rights refers to applications for patents for invention. The counts of patent filings are made principally by counting each national, regional, or international application only once. However, alternative representations are also given in Chapter 3 in terms of the demands for national patent rights, after cumulating the number of designated countries over applications. This makes a difference only in regard to systems where multiple countries can be designated in an application (PCT and regional systems). Demands for "*national*" patent rights effectively measures the number of national patent applications that would have been necessary to seek patent protection in the same number of countries if there were no PCT or regional systems. The counts include direct national filings, designations in regional systems, national stage PCT applications, and designations in regional stage PCT applications.

DIRECT APPLICATIONS

"*Direct*" applications are filed directly with the country or regional patent office where protection is sought and are counted in the year they are filed. They are distinguished from "*PCT*" applications in order to distinguish the two subsets of applications handled by patent offices.

DOMESTIC APPLICATIONS

These are defined as all demands for patents made by residents of the country where the application is filed[53]. For the purpose of reporting statistics for the EPC contracting states considered as a bloc, domestic applications are given with regard to the applications made by residents from anywhere inside the EPC bloc. For example, applications made by residents of France in one of the other EPC contracting states are counted as domestic demand in the EPC bloc.

FIRST FILINGS

These are applications filed without claiming the priority[54] of another previous filing and are counted in the year they are filed. They are usually made in the home country or region. All other applications are subsequent filings, usually made within one year of the first filings. In the absence of a complete set of available statistics on first filings, it is assumed in this report that domestic national filings are equivalent to first filings[55] and that PCT filings are subsequent filings. Currently, USPTO first filing data, unless otherwise noted, also include a substantial proportion of applications that are continuations of applications previously filed at the USPTO. See also *APPLICATIONS, COUNTING OF*.

FOREIGN APPLICATIONS

[53] For the USPTO, this is by the residence of the first-named inventor; For the EPO, the JPO, the KIPO, and the CNIPA, this is by the residence of the first-named applicant.
[54] See the Article 4A to 4D of the Paris Convention at the WIPO web site, www.wipo.int/treaties/en/ip/paris/
[55] The data source used for patent families allows a precise count of first filings. Except in the sections on patent families, an approximation of the number of first filings in the EPC Bloc is made by adding first filings at the EPO to aggregated domestic national applications in the EPC contracting states.

These are defined as all demands for patents made by residents of a location outside of the country or region where the application is filed[56]. See the term definition for Domestic Applications for additional details.

GRANTS, COUNTING OF

Grant counts in Chapter 3 are based on the WIPO Statistics Database[57]. They are counted in the year that the grants are issued or published. As with the demand for patent rights, the demand for rights granted in each bloc are considered after cumulating the number of designated countries for which national patent rights have been granted via regional procedures. The counts in Chapter 4 and proportions of PCT grants in Chapter 5 are based on IP5 Offices data.

CROSS FILINGS

IP5 cross filings are patent applications filed at the IP5 Offices during the same time period (i.e. calendar year in this report) and claiming the same priority. Such applications can be filed as direct national, direct regional or PCT that entered the national or regional stage during the reporting period. The priority application may have been filed in any patent office in the world. Cross filings are filed in at least two and up to all five IP5 Offices. Counts of cross filings are based on the number of underlying priorities claimed in subsequent patent applications filed in the reporting period.

The counts of cross filings are considered an indicator for shared workload among the IP5 Offices. Cross filings are therefore reported according to the year of the subsequent applications.

Contrary to patent families involving activity in the individual EPC Contracting States, cross filings in Europe are limited to subsequent filings at the EPO. Cross filings are reported according to the year of the subsequent applications while patent families are reported according to the year of the priority applications.

PATENT FAMILIES

A patent family is a group of patent filings that claim the priority of the same initial first filing, including the original priority forming filing itself and any subsequent filings made throughout the world. Utility model applications are excluded.

Contrary to previous editions of the IP5 Statistics Report, the patent family counts are compiled from the EPO's DOCDB database, which is fed with data from patent publications from patent offices worldwide. The numbers of domestic national filings presented in Fig 3.4 are used as measures of first filings. Therefore, the numbers of first filings in Table 3 conform to those in Figure 3.4.

The proportions of the overall numbers of first filings that generated families using the PCT in Figure 5.5 make use only of patent families data, as in previous reports. For the purposes of this report[58], IP5 patent families are a filtered subset of patent families for which there is evidence of patenting activity in all IP5 Blocs.

[56] For the USPTO, this is by the residence of the first-named inventor; For the EPO, the JPO, the KIPO, and the CNIPA, this is by the residence of the first-named applicant.
[57] www.wipo.int/ipstats/en/statistics/pct/index.html
[58] The additional statistical tables that are available at the web site, and previous editions of this report,

Due to the change of source data, differences with counts given in previous editions of the report may occur.

PATENTS IN FORCE

Patents in force are patents that have not yet expired. Patents may expire for several reasons, two of the most common being the completion of their patent term and the failure to pay a required maintenance fee.

PCT APPLICATIONS

Applications that are filed under the PCT are first handled by appointed offices during the international phase. About 30 months after the first filing, they enter the national/regional phase to be treated as national or regional applications according to the regulations of each designated office where protection is sought. “PCT” applications are distinguished from “direct” applications in order to distinguish the two subsets of applications handled by patent offices. PCT applications are usually counted in the year that they enter the national (or regional) phase, although in some parts of this report they are counted in the year of filing in the earlier international phase[59].

REQUESTS FOR PATENTS ENTERING A GRANT PROCEDURE

These are filings that entered a grant procedure and include direct national, direct regional, national phase PCT, and regional phase PCT applications. Direct national and direct regional applications enter a grant procedure when filed, while in the case of PCT applications, the grant procedure is delayed to the end of the international phase.

SUBSEQUENT FILINGS

Subsequent filings are applications filed that claim the priority[60] of a previous filing and usually are made within one year of the first filings. See also FIRST FILINGS. Currently, USPTO subsequent filings data also include a substantial proportion of applications that are continuations of applications previously filed at the USPTO.

also give statistics on Trilateral Patent families and Four blocs families. These are a filtered subset of patent families for which there is evidence of patenting activity in all the Trilateral blocs (EPC, Japan, and U.S.), or all the Trilateral blocs and R. Korea, respectively.

[59] An international phase PCT application can in theory be a first filing but is usually a subsequent filing made up to twelve months after a first filing. A national (or regional) phase PCT entry can follow on from the corresponding international phase PCT filing and is made up to 30 months after the first filing.

[60] See the Article 4A to 4D of the Paris Convention at the WIPO web site, www.wipo.int/treaties/en/ip/paris/

EXPLANATIONS OF THE PATENT PROCEDURES

The following section contains additional explanations of the IP5 Offices patent procedures as shown in Figure 4.9.

EXAMINATION: SEARCH AND SUBSTANTIVE EXAMINATION

Each of the IP5 Offices examines a filed patent application based upon novelty, inventive step, and industrial applicability. At the EPO, the process involves two phases: a search to establish the state of the art with respect to the invention and a substantive examination to evaluate the inventive step and industrial applicability. For the second phase, a separate request has to be filed no later than six months after publication of the search report.

In the national procedures before the JPO, the KIPO, the CNIPA, or the USPTO, the search and substantive examination are undertaken in one phase.

Filing of a national application with the USPTO is taken to imply an immediate request for examination. At the JPO, the KIPO, and the CNIPA, deferred examination systems exist and filing of a national application does not imply a request for examination. This may be made up to three years after filing for the JPO, the KIPO and the CNIPA.

The international searches and international preliminary examinations carried out by the IP5 Offices as PCT authorities are not included in the flow chart.

PUBLICATION

In the IP5 Offices, the application is to be published no later than 18 months after the earliest priority date, or otherwise the date of filing (in case of a first filing). The application can be published earlier at the applicant's request. In each of the IP5 Offices, the publication process is independent of other office processes, such as examination. Also, at the USPTO, an application that has not and will not be the subject of an application filed in foreign countries does not need to be published if an applicant so requests.

GRANT, REFUSAL / REJECTION, WITHDRAWAL

When an examiner intends to grant a patent, this information is communicated to the applicant: announcement of grant (EPO), decision to grant (JPO), decision to grant (KIPO), decision to grant (CNIPA), and notice of allowance (USPTO). If a patent cannot be granted in the form as filed before the office, the intention to reject the application is communicated to the applicant: (unfavourable) examination Report (EPO), notification of reason for refusal (JPO), notification of reason for refusal (KIPO), notification of reason for refusal (CNIPA), and office action of rejection (USPTO). The applicant may then make amendments to the application, generally in the claims, after which examination is resumed. This procedural step is iterated as long as the applicant continues to make appropriate amendments. Then, either the patent is granted or the application is finally rejected-intention to refuse (EPO), decision of rejection (JPO), decision of rejection (KIPO), decision of rejection (CNIPA), final rejection (USPTO) - or withdrawn by the applicant - withdrawal (EPO), withdrawal or abandonment (JPO), withdrawal or abandonment (KIPO), withdrawal or abandonment (CNIPA), and abandonment (USPTO). In addition, if no request for examination for an application is filed to the EPO, the JPO, the KIPO, or the CNIPA within a prescribed period (six months after publication of the search report for the EPO, three years from the date of filing for the JPO, the KIPO and the CNIPA), the application will be deemed to have

been withdrawn. In all five procedures, an applicant may withdraw or abandon the application at any time before the application is granted or finally refused.

After the decision to grant the patent, the patent specifications are published if certain administrative conditions are fulfilled, known as Publication of patent (the EPO, the JPO, the KIPO, the CNIPA, and the USPTO). At the USPTO, this action also is referred to as “Patent issuance.” Patents granted by the EPO are also then subject to validation in the designated member states where the applicant is seeking patent protection.

OPPOSITION

The opposition procedures allow third parties to challenge a patent granted before the granting office.

There is no opposition system at the KIPO, and the CNIPA.

At the EPO, the period for filing opposition(s) begins after granting of the patents and lasts nine months. If successful, the opposition can lead to a revocation of the patent or to its maintenance in amended form. Furthermore, the patentee may request a limitation or a revocation of his own patents.

At the JPO, only within six months from the date of publication of the Gazette containing the patent, any person may file an opposition to the grant of the patent. The examination of the opposition shall be conducted by documentary examination.

At the USPTO, prior to the implementation of the Leahy-Smith America invents Act (AIA) on September 16, 2012, there were two types of third party opposition procedures: interference and re-examination. The AIA revised these and introduced some additional procedures. Under the AIA, there are now six distinct procedures for third party opposition, including post grant review, inter parte review, business method review, ex parte re-examination, interference, and derivation.

TRIAL AND APPEAL

An appeal can be filed by any of the parties concerned against a decision taken by the IP5 Offices. In practice, applicants can appeal decisions to reject an application or revoke a patent, while opponents can appeal decisions to maintain a patent. The procedure is in principle similar for the IP5 Offices. The examining department first studies the argument brought forward by the appellant and decides whether the decision should be revised. If not, the case is forwarded to a Board of Appeal, which may take the final decision or refer the case back to the examining department.

The JPO deals with ex parte appeals (e.g. appeals against examiner’s decision of refusal) and inter partes trials (e.g., trials for invalidation). If applicants have an objection to examiner’s decision of refusal, they can file an appeal against the examiner’s decision of refusal with the JPO. In case the applicants have made an amendment at the time of requesting the appeal against the examiner’s decision of refusal, the examination department that has issued said decision will examine the case again. During this examination, only those which are not eligible for patent grant are transferred to the board of trial and appeal where the proceedings of appeals shall be executed. In addition, any interested party can demand a trial for invalidation upon registration of the establishment of rights. At the trial for invalidation, oral proceedings shall be executed in principle.

The CNIPA has re-examination and invalidation procedures. Where an applicant for a patent is not satisfied with the decision of the CNIPA rejecting the application, the applicant may, within three months from the date of receipt of the notification, request the Patent Re-examination Board to make a re-examination. Where any entity or individual considers the grant of a patent right is not in conformity with the relevant provisions of the Patent Law, a request can be made to the Patent Re-examination Board to declare the patent right invalid.

DEFINITIONS FOR STATISTICS ON PROCEDURES

The following section contains additional definitions for terminology appearing in Table 4.3 follow.

EXAMINATION RATE

This rate shows the proportion of those applications, for which the period to file a request for examination expired in the reporting year, that resulted in a request for examination up to and including the reporting year.

For the EPO, the request for examination has to be filed no later than six months after publication of the search. For example, the rate for 2023 relates to applications mainly filed in the years 2019 to 2023.

For the JPO, the period to file a request for examination is three years from filing date. The rate for 2023 relates mainly to applications filed in the year 2020.

For the KIPO, the period to file a request for examination has been changed from 5 years to 3 years from filing date in 2018. The rate for 2023 relates mainly to applications filed in the year 2020.

For the CNIPA, the period to file a request for examination is three years from filing date.

At the USPTO, as filing an application implies a request for examination, such a request is made for all applications.

GRANT RATE

For the EPO, this is the number of applications that were granted during the reporting period, divided by the number of disposals in the reporting period (applications granted plus those abandoned or refused).

For the JPO, the grant rate is the number of decisions to grant a patent divided by the number of disposals in the reporting year (decisions to grant or to refuse and withdrawals or abandonment after first office action).

For the KIPO, the grant rate is the number of patent approvals divided by the number of disposals in the reporting year (sum of the numbers of patent approvals, rejections, and withdrawals after first office action).

For the USPTO, the displayed USPTO grant rate is the total number of issued patents divided by the total number of applications disposed of in the reporting year. RCEs are not included in the disposals. This grant rate differs from the allowance rate usually reported by the USPTO, which counts the total number of applications determined to be eligible by USPTO patent examiners for a patent divided by the total number of applications disposed of in a reporting year. For the allowance rate, RCEs are included in the disposals. Both rates include plant and reissue patent applications in addition to utility patent applications. However, since utility applications comprise over 99 percent of these applications, the rates are almost identical to rates based strictly on utility applications.

OPPOSITION RATE

This term applies to the EPO and the JPO. The USPTO has opposition procedures but does not currently produce an opposition rate.

The opposition rate for the EPO is the number of granted patents for which the opposition period (which is nine months after the date of grant) ended in the reporting year and against which one or more oppositions were filed, divided by the total number of patents for which the opposition period ended in the reporting year.

The JPO rate is the total number of oppositions (counting one (1) for each patent) filed in the calendar year divided by the total number of granted patents in the calendar year.

APPEAL ON EXAMINATION RATE

For the EPO, the rate is the number of decisions to refuse in the examination procedure against which an appeal was lodged in the reporting year, divided by the number of all decisions to refuse for which the time limit for appeal ended in the reporting year.

The JPO rate is the total number of appeals against examiners' decisions of refusal filed in the calendar year divided by the total number of examiners' decisions of refusal rendered by the examiners in the calendar year.

For the KIPO, the rate is the number of appeals filed during the year after the examiner's decision to issue a final rejection against a patent application divided by the number of final rejections issued against a patent application during the year.

The USPTO rate, which includes utility, plant, and reissue categories, captures the number of appeals filed after an examiner's decision to issue a final rejection against a patent application. The rate is the number of examiner answers written during the year in response to appeal briefs divided by the number of final rejections issued that year. This rate includes plant patents and reissue patents in addition to utility patents (see above GRANT RATE).

For all five offices, any subsequent litigation proceedings in national courts are not included.

PENDENCY/ EXAMINATION / NUMBER OF APPLICATIONS AWAITING REQUEST FOR EXAMINATION

This does not apply to the USPTO.

This figure indicates the number of filed applications awaiting a request for examination by the applicant.

For the EPO, this indicates the number of applications for which the search report has not been published (pending in search) by the end of the reporting year, added to the number of applications for which the search report has been published but the prescribed period for the request has not expired (six months after publication of the search report).

For the JPO, the KIPO, and the CNIPA, the numbers of applications awaiting request for examination indicate the numbers of applications for which no request for examination has been filed by the end of the reporting year, and for which the

prescribed period for the request (three years after filing for the JPO, the KIPO and the CNIPA) has not expired.

For the JPO, numbers include the number of abandoned/withdrawn applications.

PENDENCY / EXAMINATION / NUMBER OF PENDING APPLICATIONS

For the EPO, this is the number of applications filed for which the search was completed and the request for examination was filed, yet they have not received a final decision by the examining division (announcement to grant, to refuse or abandonment) by the end of the reporting year.

For the JPO and the KIPO, pending applications in examination are applications for which the requests for examination were filed and which have been waiting for a first action and have not been subject to a final action such as withdrawal or abandonment by the end of the reporting year.

For the USPTO, pending applications in examination are applications that are waiting for a first action and have not been subject to a final action such as withdrawal or abandonment by the end of the reporting year. These figures do not include other pending applications that have been subject to a first action.

PENDENCY / EXAMINATION / PENDENCY FIRST OFFICE ACTION

This is measuring the delay until the first action on patentability.

For the EPO, the pendency to first office action is the average time period, in months, measured from the date of filing the application to the date of issue of the European search report which is extended to include an opinion on the patentability. The calculation is based on standard cases (i.e. excluding non-unity, incomplete search and or clarification request cases). The EPO changed their measurement from median to arithmetic mean. The figures for 2018 have been re-compiled based on the new methodology.

For the JPO, the first action pendency is the period from the date of examination request until the JPO sends the first notice of examination results to the applicant, etc. (for the most part, either a notice of patent grant or a notice of reasons for refusal).

For the KIPO, pendency first office action is the average time period, in months, from the request for examination to first office action in examination.

For the CNIPA, pendency first office action is the average time period, in months, from when applications entered the substantive examination phase following the request for examination to first office action in examination.

For the USPTO, first office action pendency compliance refers to the percentage of applications with a time from filing to First Action on the Merits (FAOM) within 14 months. An FAOM is generally defined as the first time an examiner either formally rejects or allows the claims in a patent application. The USPTO does not utilize an average pendency measure comparable to the other IP5 Offices. The USPTO has been moving to a compliance-based metric, which corresponds to the information shown in Table 4.3, with a set goal of mailing first actions within 14 months of filing in 45 percent of new cases acted upon, and issuing an allowance within 36 months of filing in 80 percent of all allowed cases. Showing traditional pendency in Figure 4.12 is done to go along with the more detailed time stops depicted.

PENDENCY / EXAMINATION / PENDENCY FINAL ACTION

For the EPO, the counts relate to pendency until a final decision by the examining division (decisions to grant) during the reporting year. This is the average time elapsed from the date on which the application enters the substantive examination, once the request for examination has been completed, to the date of the decision by the examining division. The calculation is based on standard cases (i.e. excluding cases with more than one request for extension of time limit or late payment of fees or rescheduling of oral proceeding).

For the JPO the total pendency (also called the “standard pendency”) is the period from the date of examination request to withdrawal or abandonment or until a final disposition (excluding cases where the JPO requests an applicant to respond to the second notice of reasons for refusal due to the amendments submitted by the applicant, and where the applicant performs procedures they are allowed to use, such as requests to the JPO for extension of the period of response and for an accelerated examination).

For the KIPO, pendency for examination in months is the total number of months taken for disposing applications as final actions (decisions to grant or to refuse, withdrawals, or abandonments) in the reporting year, divided by the number of final actions during the reporting year.

For the CNIPA, pendency for examination refers to the average time period taken, in months, for the granting of invention patent applications, calculated from the date on which the application enters the substantive examination phase to the date on which the decision to grant is issued.

For the USPTO, filing to issue compliance is calculated by measuring the time from filing to abandonment or issue for all applications that are issued in a year. The percentage of applications that have a compliance within 36 months is presented. This number includes plant patents and reissue patents in addition to utility patents (see above GRANT RATE). The USPTO does not utilize an average pendency measure comparable to the other IP5 Offices. Showing traditional pendency in Figure 4.12 is done to go along with the more detailed time stops depicted.

PENDENCY INVALIDATION

The CNIPA, “Pendency time in invalidation” refers to the duration from the date on which the notification of acceptance of request for invalidation is issued to the date on which the examination decision on request for invalidation is issued.

The JPO pendency period is the average processing period for a trial for invalidation in a calendar year from the date a request for a trial for invalidation is filed, to the date a trial decision is dispatched (if an “advance notice of a trial decision” is to be made, it is the date the notice is dispatched), to the date a withdrawal or abandonment is finalized and concluded, or to the date a dismissal is dispatched.

Annex 3

ACRONYMS

AI	Artificial Intelligence (i)
AIA	Leahy-Smith America Invents Act (101)
ARIPO	African Regional Intellectual Property Office (43)
ASEAN	Association of Southeast Asian Nations (31)
BRI	Belt and Road Initiative (31)
CI²	Council for Inclusive Innovation (36)
CNIPA	China National Intellectual Property Administration (i)
CPC	Cooperative Patent Classification (11)
DGIP	Directorate General of IP (26)
DO	Designated Office (19)
DOCDB	DOCumentDataBase (55)
EAPO	Eurasian Patent Organization (43)
EP	European patent (12)
EPAC	European Patent Administration Certification (13)
EPC	European Patent Convention (ii)
EPLAW	European Patent Lawyers Association (13)
EPLIT	European Patent Litigators Association (13)
EPN	European Patent Network (14)
EPO	European Patent Office (i)
EQE	European Qualifying Examination (13)
EUIPO	European Union Intellectual Property Office (16)
FAOM	First Action on the Merits (105)
FY	Fiscal Year (23)
GCCPO	Gulf Cooperation Council Patent Office (43)
GX	Green transformation (20)
GXTI	Green Transformation Technologies Inventory (20)
IB	International Bureau of WIPO (iii)
IP	Intellectual Property (i)
IP5	Five IP Offices: EPO, JPO, KIPO, CNIPA, USPTO (i)
IP5 SR	IP5 Statistics Report (i)
IPC	International Patent Classification (3)

INPIT	National Center for Industrial Property Information and Training (92)
IPEA	International Preliminary Examining Authority (3)
IPRs	Intellectual Property Rights (24)
ISA	International Searching Authority (3)
IT	Information technology (10)
JPO	Japan Patent Office (i)
KIIP	Korea Institute of Intellectual Property (25)
KIPO	Korean Intellectual Property Office (i)
MIPEF	Modular IP Education Framework (ii)
ML	Machine Learning (36)
MoUs	Memorandums of Understanding (37)
NBS	National Bureau of Statistics (30)
NET/AI	New Emerging Technologies/Artificial Intelligence (i)
OAPI	Organisation African Intellectual Property (43)
PATLIB	Patent information centres (14)
PCT	Patent Cooperation Treaty (i)
PGP	Patent Granting Process (11)
PPH	Patent Prosecution Highway (iii)
P.R. China	People's Republic of China (2)
PTA	Patent Term Adjustment (36)
PTAB	Patent Trial and Appeal Board (25)
SMEs	Small and Medium-sized Enterprises (11)
SP2023	Strategic Plan 2023 (10)
R&D	Research and Development (20)
RCE	Request for Continued Examination (38)
R. Korea	Republic of Korea (2)
RO	Receiving Office (3)
RP	Reinforced Partnership (14)
UP	Unitary Patent (12)
UPC	Unified Patent Court (ii)
U.S.	United States of America (2)
USPTO	United States Patent and Trademark Office (i)
WIPO	World Intellectual Property Organization (iii)

European Patent Office (EPO)
Bob-van-Benthem-Platz 1
80469 Munich
Germany
www.epo.org/

Japan Patent Office (JPO)
3-4-3 Kasumigaseki, Chiyoda-ku
Tokyo 100-8915
Japan
www.jpo.go.jp/e/

Korean Intellectual Property Office (KIPO)
Government Complex Daejeon Building 4
189, Cheongsa-ro, Seo-gu, Daejeon, 35208
Republic of Korea
www.kipo.go.kr/en/

China National Intellectual Property Administration (CNIPA)
No. 6, Xitucheng Lu, Jimenqiao,
Haidian District
Beijing 100088
People's Republic of China
english.cnipa.gov.cn/

United States Patent and Trademark Office (USPTO)
P.O. Box 1450
Alexandria, VA 22313
United States
www.uspto.gov/

This report contains statistical information from the five major Patent offices in the world (IP5 Offices). It gives a description of worldwide patenting activities, and provides details and comparison about the business processes taking place at each office.

Edited by the KIPO, 2024
Jointly produced by the EPO, JPO, KIPO, CNIPA, and USPTO.