

METHODOLOGICAL INFORMATION

A patent is an exclusive right granted by law to applicants / assignees to make use of and exploit their inventions for a limited period of time (generally 20 years from filing). The patent holder has the legal right to exclude others from commercially exploiting his invention for the duration of this period. In return for exclusive rights, the applicant is obliged to disclose the invention to the public in a manner that enables others, skilled in the art, to replicate the invention. The patent system is designed to balance the interests of applicants / assignees (exclusive rights) and the interests of society (disclosure of invention).

Patent statistics as an indicator of inventive activity

It is widely accepted that patent statistics are a reliable (although not perfect) indicator of innovative activity. Therefore, it has become standard practice to use patent statistics for monitoring innovative activities and the development of new technologies. However, when using patent statistics as an indicator of inventive activity, the following points should be taken into consideration:

- Not all inventions are patented. There are other alternatives such as trade secrecy or technical know-how available to inventors for protecting their inventions.
- Use of the patent system for protecting inventions varies across countries and industries. Applicants' different filing strategies or filing preferences may render direct comparison of patent statistics difficult.
- Differences in patent systems may influence the applicant's patent filing decisions in different countries.
- Due to the increase in the internationalization of research and development (R&D) activity, R&D may be conducted in one location but the protection for the invention might be sought in a different one.
- Cross-border patent filings depend on various factors, such as trade flows, foreign direct investment, market size of a country, etc.

Notwithstanding the points mentioned above, patent statistics do provide valuable information about innovative activity.

Patent statistics methodology

To obtain patent rights, the applicant must file a patent application and pay fees. The patent office examines the application and decides whether to grant or reject the application. A large volume of data is generated during the patent application process, which are frequently used by researchers to construct statistical indicators for measuring innovative activity, patenting activity of offices and countries, etc. However, for correctly interpreting patent statistics, it is important to understand the methodology used in constructing the indicators.

- **Date:** patent indicators are often constructed based on dates. Indicators used in this report are based, in general, on the following concepts:
 - Patent filing (application) indicators are constructed according to the patent filing date.
 - Patent grant indicators are based on the grant date.
 - Patent families data are based on the priority (first filing) date.
 - Technology indicators are based on the publication date.
- **Country of origin:** patent applications include information pertaining to the country of residence of the inventor and the applicant (or assignee). Patent statistics based on the country of residence of the inventor may indicate the location of the invention, whereas the country of residence of the applicant (or assignee) provides information about the owner of the patent at the time of the application.

- Country of origin used in this report is based on the country of residence of the first-named applicant (or assignee), which will include companies that are domiciled in a country but which may be effectively owned or controlled by overseas interests. This is particularly the case in countries with large foreign direct investments.
- Statistics based on the concept of resident and non-resident filings are included in this report. Resident filing refers to an application filed at an office of or acting for the State in which the first-named applicant in the application concerned has residence. Likewise, non-resident filing refers to an application filed at an office of or acting for the State in which the first-named applicant in the application concerned does not have residence.

National and international patent systems

The procedures for patent rights are governed by the rules and regulations of national and regional offices. There are a number of international (e.g. see PCT section below) and regional treaties in existence, which have brought national legal frameworks governing patent systems closer together. However, in order to accommodate different national interests and needs, there are differences in the architecture of patent systems at the national level. While more commonalities among the national legal systems are found with regard to certain elements of the patent system, other aspects reflect substantially different approaches. The existence of differences within the patent system has a significant impact on the statistical indicators and may hamper proper interpretation of such indicators. For example:

- The existence of alternative forms of patent rights to standard patents, such as utility models, provisional patent applications and design patents may result in fewer standard patent applications.
- There are differences in the patentability of subject matter. For example, it is possible to protect business method inventions in some jurisdictions but not in others.
- In some patent offices, submission of a patent application automatically results in search and/or examination, while in other offices an applicant is required to make a request for examination within a specified time limit.

To assist users in correctly interpreting and analyzing patent statistics, WIPO has collected and published information on the characteristics of different national patent systems which is available at: www.wipo.int/ipstats/en/resources/.

The Patent Cooperation Treaty (PCT)

The Patent Cooperation Treaty (PCT) is an international treaty administered by the World Intellectual Property Organization (WIPO). The PCT makes it possible to seek patent protection for an invention simultaneously in a large number of countries by filing a single "international application" with a single patent office (i.e. receiving Office). The PCT system simplifies the process of multi-national patent filings by reducing the requirement to file multiple patent applications for multi-national patent rights. The PCT international applications do not result in the issuance of "international patents" and the International Bureau (IB) does not grant patents. The decision on whether to confer patent rights remains in the hands of the national and/or regional patent offices, and the patent rights are limited to the jurisdiction of the patent granting authority. The PCT procedure consists of an international phase and a national/regional phase. The PCT international application process starts with the international phase and concludes with the national/regional phase. For further details about the PCT system, refer to: www.wipo.int/pct/en/ and www.wipo.int/ipstats/en/statistics/pct/.