

## Innovators in India need to gear up for filing more patents

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India is the world's second-most populous country, accounting for 17.7% of the worldwide population, with more than 50% of the population under the age of 25 and more than 65% under 35. Also, India's education system is the world's second-largest, with more than 1000 research institutions and 40,000 colleges in the country. As per SJR Scimago international rankings data, India is publishing many research articles published in peer-reviewed national and international journals. However, the country's researchers lack in securing their intellectual property rights, viz. patents, copyrights, trademarks, etc. The data suggesting the low patent filing is compiled from the recent annual report by the Controller General of Patents, Designs and Trade Marks (CGPDTM) and the World Intellectual Property Organization (WIPO) for the year 2020.

An old proverb mentions 'Necessity is the Mother of Invention'. Innovation and creativity result in inventions that act as a significant driving force for technological advancement, ultimately leading to industry development and the economic welfare of any country. In the era of knowledge economy, the role of intellectual property rights (IPRs) is crucial for economic development. The most critical step taken in this regard was in 1970, when the Government of India enacted 'The Patent Act, 1970'. Further to fortify the dedicated system for inventions, subsequent amendments were also affected in 1999, 2002 and 2005. In 1994, India signed the Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement. On 1 January 2005, the country became fully TRIPS-compliant by bringing into effect its most crucial requirement of enforcing product patents in the fields of food, chemical substances and pharmaceuticals. Before the TRIPS agreement, patents were exclusively governed by national jurisdiction, subject to local laws framed according to the national development goals and local needs. Another defining moment in patenting came in 1998, when India became a signatory to the Patent Cooperation Treaty. As a result, inventors can now protect their inventions internationally through a single application.

According to the latest annual report released by CGPDTM in January 2022 (ref. 1), a total of 56,267 patent applications were filed with the Indian Patent Office (IPO) during 2019–20. Resident (i.e. Indian applicants) filing was 20,843, which is 37.5% of the total filings. The rest of the applications were filed by non-residents (i.e. applicants from other countries through a national phase or convention applications). The top countries are USA (8718), Japan (3854), China (3433) and Germany (2065). The report also gives domain-wise information

on patents filed and granted. Computer/electronics (11,126), mechanical (10,359), communication (6862), pharmaceuticals (5622) and chemical (5198) are the major fields in which patent applications have been filed (Figure 1).

The Indian Institutes of Technology collectively lead in Indian applicants for patents from academic institutions and universities with 664 applications. Among the Scientific Research and Development Organizations, the Council of Scientific and Industrial Research, New Delhi tops with 169 applications in the reporting year. Defence Research and Development Organization, New Delhi (89) and Indian Council of Agriculture Research, New Delhi (40) are ranked second and third respectively. The Indian Council for Medical Research, New Delhi and the Indian Space Research Organisation, Bengaluru have also been listed amongst India's top 10 applicants. The total number of patents granted during 2019–20 was 24,936. This figure is 63% more than that granted in 2018–19 (15,283).

The total revenue generated by the Indian Patent Office was ₹ 621.77 crores during

2019–20, whereas only ₹ 20.74 crores was the expenditure for the same period, thus earning a profit of ₹ 601.03 crores. If all categories of IP (patents, copyrights, trade marks, industrial designs, geographical indicators, etc.) are taken into account, the Government of India earned a net profit of ₹ 960 crores of which patents and trademarks (₹ 352 crores) accounted for nearly 90% of the profits.

According to the recent report released by the World Intellectual Property Organization, Geneva, Switzerland<sup>2</sup>, the worldwide growth in patents filing has increased to 1.6% compared to 2019. Among the top 10 offices in patents filing are China (1,497,159), the United States (597,172), Japan (288,472), the Republic of Korea (226,759), European Patent Office (180,346), Germany (62,105), India (56,771), Russian Federation (34,984), Canada (34,565) and Australia (29,294). Only three offices, i.e. China (+6.9%), India (+5.9%) and the Republic of Korea (+3.6%) recorded an increase in applications in 2020, while Germany (–7.9%) and Japan (–6.3%) observed a decline (Figure 2).

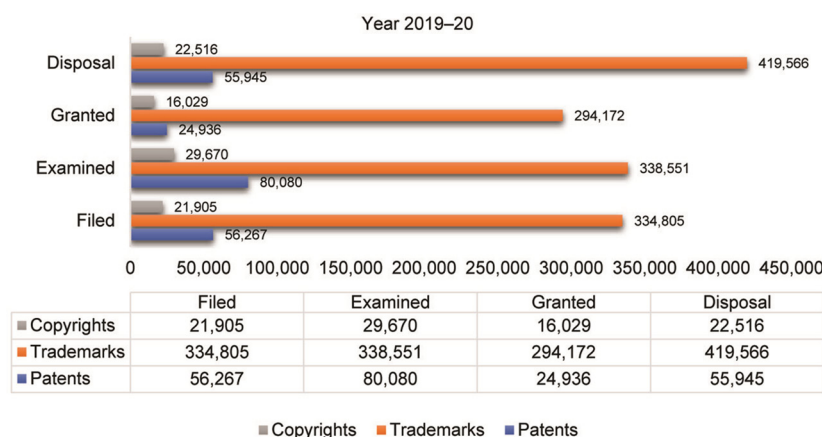
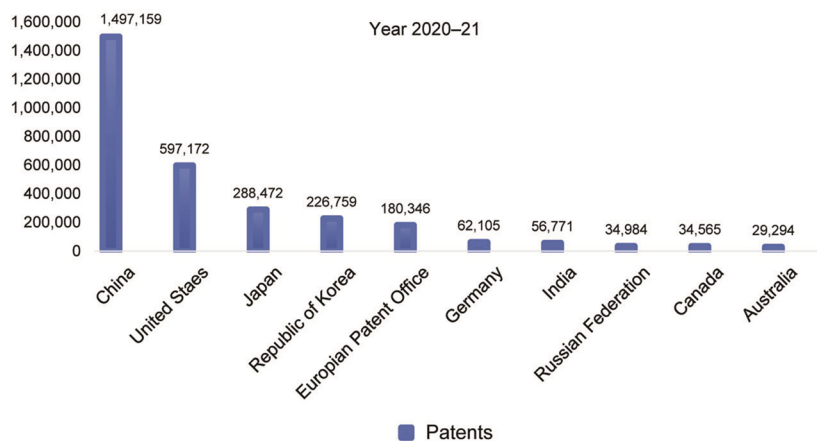


Figure 1. Patents, trademarks and copyrights profile of India in 2020.



**Figure 2.** Top 10 countries in patents filing in 2020.

Our main concern is patent filing by the residents of India. As mentioned above, only 37% of patents filed in India are by Indian residents and the rest is by foreign applicants. Other countries are filing maximum patents in India through national phases and conventions. The abysmal patent filing regime in India is attributed to many factors like policy gaps at the national or institution level, lack of support at the government level, lack of awareness among inventors/researchers, lack of funding and institutional support, fewer collaborations between university and industry, and the absence of dedicated IPR/technology, transfer offices, etc. The most crucial factor is the lack of awareness and those who are aware are hesitant to file patents as the process is time-consuming and expensive

for an individual. So, the first intervention should be streamlining the time and process of filing patents and focusing more on awareness of IP filing and securing problems. The issues mentioned above need to be addressed at the central, state, and institutional levels to encourage researchers for IP protection and its commercialization.

1. Annual Report, Office of the Controller General of Patents, Designs & Trade Marks (CGPDTM), Mumbai, 2019–20.
2. WIPO, World Intellectual Property Indicators Report. World Intellectual Property Organization, Geneva, Switzerland, 2021.

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