AN OVERVIEW ON PATENT STATUS OF INDIA

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Abstract

In India, the arrangements of protected innovation rights under World Intellectual Property Organization (WIPO) and patents have pulled in various individual associations into it. They have begun to investigate conceivable outcomes of business with industrial information. As there is growth in the patent, organisations and individuals across the globe and, especially, those from American and European continent are trying to enjoy the benefits by patenting their products. With the help of patent, a firm can capture international advantages and investments. Foreign investors have recognized that the market is sufficiently good for innovative products, and have ample opportunities for patents. The international inventors who file to acquire patents in different fields enhance the economic growth of the country and create employment opportunities. This article draws the attention of patent status prevailed in India for the past five years

Keywords: Patent, World Intellectual Property Rights Organization, IPRs, GDP, Patent application, Patent grant.

Introduction

Patent is a government authority or license conferring a right or title for a set period, especially, the sole right to exclude others from making, using or selling an invention. The word patent originates from the Latin word 'Patere' which means "to lay open" (to make available for public inspection). In short the term patent, which was a royal decree granting exclusive right to a person, predating the modern patent system.

The pharmaceutical patent or drug patent is a patent for an invention in the chemical or pharmaceutical industry. Strictly speaking, in most jurisdictions, there is essentially no difference between the legal requirements to obtain a patent for an invention in the chemical pharmaceutical field as compared to obtaining a patent in the other fields, such as in the mechanical field.

Literature Review

Most monetary contentions for patent assurance lay on a more extensive issue: the basic significance of development exercises and their outcomes for financial development and social welfare (Rockett, Eleanor Rockett, & Katharine, 2010). There are two fundamental ways in which patent rights encourage the advancement of innovation, development and social welfare(Peter S. Menell & Suzanne Scotchmer, 2007). The principal way mirrors the private reward allowed for development, through the innovator's selective ideal to utilize or sell the patented creation ("reward theory"). The need to present some ex ante motivation component gets from the acknowledgment that the definitive consequence of the advancement procedure is the creation of new learning. As per old style contentions formalized by Arrow(Arrow, 1962; Griliches & Lichtenberg, 1984; Levin et al., 1987), information additionally shares ordinary qualities of "public goods" like non-competition and non-selectiveness. The non-rival character of information implies that one specialist's utilization of it doesn't constrain its utilization by others. The non-excludable character implies that, when information has been generated, others can't be ceased from utilizing it. Accordingly, in a theoretical routine of faultless market rivalry, rival firms could misuse, at almost no cost, similar information created by the pioneer, which decreases the trend-setter's prizes to a time when it is never again advantageous to lead inventive action by any stretch of the imagination. Selective legitimate rights on developments through patents help limit this sort of market disappointment, by giving satisfactory motivating forces to take part in imaginative action. The "contract theory" of patent clarifies a subsequent principle way patents can advance development (Denicolò & Franzoni, 2004; Rockett et al., 2010), to be specific, by giving contracts among designers and society, giving selective rights to the creator in return for the dissemination of data about the fundamental specialized arrangement. People in general, free accessibility of patent reports in national and worldwide patent workplaces ought to encourage the dispersal of specialized data that would then be able to be utilized by different entertainers to grow further novel arrangements, making extra gains for society.

Statement of the Problem

The patent could be essential contribution to encourage consecutive developments, the restrictive rights given by patent at last may hinder innovative procedure by representing a hindrance to upgrades (Bessen & Maskin, 2009; Merges & Nelson, 1990). The revelation estimation of patents, the reception of key recording practices by candidates and complex case development principles could seriously restrict the

viability of exposures for protected innovations (Guellec & Pottelsberghe de la Potterie, 2007). India's intellectual property (IP) administration, which was widely criticized for lack of transparency and unfair dealings in the initial years of the product patent regime, has made its file movements and examination process public. So there is a need to investigate the status of India in respect of patent.

Objective of the study

The main objective of this study is to understand the patent status prevailed in India over the last five year.

Methodology

Patent applications and publication data available in WIPO (World Intellectual Property Organization) was reviewed to understand the recent trends in terms of growth and implication of international treaties such as TRIPS and related changes in national laws to be compliant with TRIPS. The trends were examined from the data for last five years (2013-2017). Worldwide patent applications based on 154 patent offices were registered at WIPO as considered for this study. The total patent applications include applications filed directly with national & regional patent offices and applications through the PCT (Patent Cooperation Treaty national phase). The World Bank assigns the world's economies into four income groups — high, upper-middle, lower-middle, and low. The researcher bases this assignment on GNI per capita calculated using the Atlas method. The units for this measure and for the thresholds are current US Dollars. As per this statistics, the total 154 countries or economies include 58 of higher income category, 43 of Upper middle-income category, 37 of Lower-middle income category and 16 of Low-income category of countries. Finally, analyses the trends observed in patent filing in various countries across the world and the different -areas in pharmaceutical industry.

Data Analysis:

Indian Status of Patent Application

India joined WIPO in 1975. The GDP of the country was approximately 7512.5 billion US$. Indian application for patents shall be for one invention only and shall be made in the prescribed form. Where the application is made by virtue of an assignment of the right to apply for patent for the invention, they shall be furnished with the application, or within such period as may be prescribed after the filing of the application, proof of the right to make the application. Every application under this section shall state that the applicant is in possession of the invention and shall name the owner claiming to be the true and first inventor; and where the person so claiming is not the applicant or one of the applicants, the application shall contain a declaration that the applicant believes the person so named to be the true and first inventor.

Table 1.1
Indian Status of Patent Application

Year	Total Number of Patent Applications				
	India	Asia	India's share of Asian Total (%)	World	India's Share of World total (%)
2013	43031	1497700	2.87	2564500	1.68
2014	42854	1607500	2.67	2680700	1.60
2015	45658	1785300	2.56	2886700	1.58
2016	45057	2020000	2.23	3125100	1.44
2017	46582	2062500	2.26	3168900	1.47

Note: Worldwide patent applications based on 154 patent offices were registered at WIPO. The total patent applications include applications filed directly with national & regional patent offices and applications through the PCT (Patent Cooperation Treaty national phase).

Source: WIPO Database, August 2019.

It is the first time that Indian patent application reached more than 46000 in a year, up 3.38 per cent in 2016. Such a strong growth was reported due to the large number of filing in different fields of technology, especially, in computer (16.34 per cent), pharmaceuticals (16.3 per cent) and organic fine chemistry (14.67 per cent). India received 46582 patent applications i.e. 1525 additional applications compared to the previous year. India's share of patent applications of Asian total was 2.87 per cent in 2013, which was 2.26 per cent in 2017 (Table 1.1). Similarly, the share of patent application of world total was 1.68 per cent, which decreased to 1.47 per cent in 2017(Table 1.1).

Indian Status of Patent Application from Residents and Non-Residents

Table 1.2
Indian Status of Patent Application from Residents and Non-Residents

Year	Total Number of Patent Application from Residents and Non-Residents									
	India		Asia		India's Share of Asian Total (%)		World		India's Share of World Total (%)	
	Resident	Non-Resident	Resident	Non-Resident	Resident	Non-Resident	Resident	Non-Resident	Resident	Non-Resident
2013	10669	32362	1182598	315102	0.90	10.2	1709000	855500	0.62	3.78
2014	12040	30814	1281157	326343	0.94	9.44	1799500	881200	0.67	3.50
2015	12579	33079	1445696	339604	0.87	9.74	1972800	913900	0.64	3.62
2016	13199	31858	1683106	336894	0.78	9.46	2215200	909900	0.60	3.50
2017	14961	31621	1725446	337054	0.87	9.38	2251500	917400	0.66	3.45

Note: Worldwide patent applications based on 154 patent offices were registered at WIPO. The total patent applications include applications filed directly with national & regional patent offices and applications through the PCT (Patent Cooperation Treaty national phase).

Source: WIPO Database, August 2019.

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India received 10669 resident (0.90 per cent of Asian total and 0.62 per cent of world total) and 32362 non-resident (10.27 per cent of Asian total and 3.78 per cent of World total) patent applications in 2013. Residents' applications increased to 14961 (0.87 per cent of Asian total and 0.66 per cent of World total),

while non-residents applications decreased to 31621 (9.38 per cent of Asian total and 3.45 per cent of World total) in 2017 (Table 1.2).

Indian Status of Patent Grant

Table 1.3
Indian Status of Patent Grant

Year	Total Number of Patent Grant				
	India	Asia	India's share of Asian Total (%)	World	India's Share of World total (%)
2013	3377	656100	0.51	1169700	0.29
2014	6153	636900	0.97	1173900	0.52
2015	6022	700400	0.86	1240200	0.49
2016	8248	772300	1.07	1352300	0.61
2017	12387	803100	1.54	1404600	0.88

Note: Worldwide patent applications based on 154 patent offices were registered at WIPO. The total patent applications include applications filed directly with national & regional patent offices and applications through the PCT (Patent Cooperation Treaty national phase).
Source: WIPO Database, August 2019.

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Indian resident applications were lower than non-residents applications; the proportion of resident to the non-resident application was 0.31 in 2013, which increased to 0.47 in 2017. In Asia, the proportion of resident to the non-resident application was 3.75, which increased to 5.11 in 2017. Worldwide, the proportion of resident to non-resident application was 1.99, which s increased to 2.45 in 2017 (Table 1.3). It is the first time Indian patent grants reached more than 10000 in a year, up 50.18 per cent of the world total in 2016. Such a strong growth was reported due to large number of patent grant in different field of technology, especially in computer related field (13.30 per cent), pharmaceuticals (12.16 per cent) and items relating to organic fine chemistry (10.83 per cent). India granted 12387 patents i.e., 4139 additional patents, compared to the previous year. India's share of patent grants of Asian total was 0.51 per cent in 2013, which increased to 1.54 per cent in 2017. Similarly, the share of patent grant in the world total was 0.29 per cent, which increased to 0.88 per cent in 2017(Table 1.3).

Indian Status of Patent Grant to Residents and Non-Residents

Table 1.4
Indian Status of Patent Grant to Residents and Non-Residents

Year	Total Number of Patent Grant to Residents and Non-Residents									
	India		Asia		India's Share of Asian Total (%)		World		India's Share of World Total (%)	
	Resident	Non-Resident	Resident	Non-Resident	Resident	Non-Resident	Resident	Non-Resident	Resident	Non-Resident
2013	594	2783	480035	176065	0.12	1.58	721000	448700	0.08	0.13
2014	720	5433	453109	183791	0.16	2.96	707500	466400	0.10	0.15
2015	822	5200	502519	197881	0.16	2.63	756000	484200	0.11	0.17

2016	1115	7133	561716	210584	0.20	3.39	830000	522300	0.13	0.21
2017	1712	10675	592508	210592	0.29	5.07	866700	537900	0.20	0.32

Note: Worldwide patent applications based on 154 patent offices were registered at WIPO. The total patent applications include applications filed directly with national & regional patent offices and applications through the PCT (Patent Cooperation Treaty national phase).

Source: WIPO Database, August 2019.

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India granted 594 resident (0.12 per cent of Asian total and 0.08 per cent of world total) and 2783 non-resident (1.58 per cent of Asian total and 0.13 per cent of World total) patents in 2013, which increased to 1712 (0.29 per cent of Asian total and 0.20 per cent of World total) and 10675 (5.07 per cent of Asian total and 0.32 per cent of World total) respectively in 2017 (Table 1.4). Indian patent grant of resident status was lower than the patent grant of non-residents. The proportion of resident to non-resident patent grant was 0.21 in 2013, which decreased to 0.16 in 2017. In Asia, the proportion of resident to non-resident patent grant was 2.72, which increased to 2.81, i.e. patent granted to residents is higher than what was granted to non-residents. Globally, the proportion of resident to non-resident patent grant was 1.60, which increased to 1.62 (Table 1.4).

Patent Application by Top Fields of Technology in India

Table 1.5
Patent Application by Top Fields of Technology in India

Field of Technology	Aggregate Share (2013-2017)
Computer technology	16.34
Pharmaceuticals	16.3
Organic fine chemistry	14.67
Semiconductors	7.33
Biotechnology	4.1
Digital communication	4.1
Basic materials chemistry	3.22
IT methods for management	2.56
Measurement	2.34
Medical technology	2.26
Others	26.78

Note: Worldwide patent applications based on 154 patent offices were registered at WIPO. The total patent applications include applications filed directly with national & regional patent offices and applications through the PCT (Patent Cooperation Treaty national phase).

Source: WIPO Database, August 2019.

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Intellectual Property Rights have been acknowledged and protected in the people of India since 1975. India has added to the major international conventions on the protection of patent law has also been established by government legislation, administrative regulation and decree in the area patent. This has led to the

creation of a comprehensive legal framework to protect both local and foreign patents. India has received top most patent applications in computer technology, pharmaceutical and organic chemistry (Table 1.5).

Indian Patent status based on GDP

Table 1.6
Indian Patent status based on GDP

Year	Patent	GDP (Constant 2011 US$)
2008	11546	4533.01
2009	11939	4917.39
2010	14869	5421.92
2011	15896	5781.84
2012	18202	6097.53
2013	20908	6486.92
2014	22445	6973.78
2015	23990	7532.38
2016	25845	8067.71
2017	27985	8606.47

Notes:
1. Population (Million): 1,339.18 (2017)
2. Gross Domestic Product (Billion US$) (Constant 2011 US$ (PPP)): 8606.47 (2017)
3. Patent (Resident + Abroad)
Source: WIPO Database, August 2019.

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India had 11546 patent and GDP was 4533.01 billion US$ in 2008. After 10 years India showed a marvellous growth in patency distribution, and it led the country to attain a GDP of 8606.47 billion US$. It is the first time that Indian patent application (Resident + Abroad) crossed 26000 in a year (Table 1.6). Such a strong growth was reported due to large number of filing in different fields of technology, especially in information (16.34 per cent), pharmaceuticals (16.3 per cent) and in the field of organic fine chemistry (14.67 per cent). India received 27985 patent applications in 2017 i.e. 2140 additional applications as compared to the previous year 2016. Similarly, GDP reached more than 8500 billion US$ in a year 2017, which is 6.68 per cent more than the year 2016 (Table 1.6).

Conclusion

Patents in industries help the government to attract international investors to Indian, and to accelerate economic development of the Nation. The IP index status of India shows that there is positive relationship between IP Index and GDP. The reformulation regime happened in India provided wide benefits to use IPRs provision especially patent in different industry. In the initial period, political and economic condition prevailed in India did not support patents, but later it has improved. Unfortunately, the obstructive behaviour is still prevailing in Indian pharmaceutical sector.

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