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An Introduction to Intellectual Property Rights and their Importance in Indian Context

Lalit Jajpura,[a†] Bhupinder Singh[a] and Rajkishore Nayak[b]

[a]Faculty of Engineering and Technology, BPS Mahila Vishwavidyalaya, Khanpur Kalan, Sonipat - 131 305, India

[b]School of Fashion and Textiles, RMIT University, Melbourne, Australia

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The intellectual property rights (IPR) are intangible in nature and gives exclusive rights to inventor or creator for their valuable invention or creation. In present scenario of globalisation, IPR is the focal point in global trade practices and livelihood across the world. These rights boost the innovative environment by giving recognition and economic benefits to creator or inventor whereas the lack of IPR awareness and its ineffective implementation may hamper the economic, technical and societal developments of nation. Hence dissemination of IPR knowledge and its appropriate implementation is utmost requirement for any nation. The present paper highlights various terms of IPR such as patents, trademarks, industrial designs, geographic indications, copyright, etc with their corresponding rules, regulations, their need and role especially pertaining to Indian context. Further, status of India's participation in IPR related activities across the world has been discussed in brief.

Keywords: Intellectual property rights, WIPO, patents, trademarks, industrial designs, layout design of semiconductor integrated circuit, geographic indications, copyright and related rights

In wake of globalisation, it is utmost important to be ahead in innovations and creativeness to compete the stiff competitions in technology and trade. India is well recognised for its intellectual skills in the fields of software engineering, missile technology, Moon or Jupiter mission and other technological areas. However, India lags in generation of IPR assets in terms of registered patents, industrial design, trademarks, etc. In a recent report by the US Chamber of Commerce, India stood at 29th position amongst 30 countries in IP index around the globe. It is very alarming condition for policy makers as well as for the nation as a whole.[1]

The development of any society directly depends on IPR and it policy frame work.[2] Lack of IPR awareness resulted in the death of inventions, high risk of infringement, economic loss and decline of an intellectual era in the country. Thus, there is a dire need for dissemination of IPR information so as to boost indigenous inventions and developments in the field of research and technology. [3,4]

In foregoing section of this paper an effort is made to highlight various intellectual property rights in context to India with their related corresponding rules, regulations, their need and role in society.

Intellectual Property Rights and their Classification

The term Intellectual property is related to human brain applied for creativity and invention. Various efforts in terms of inputs of manpower, time, energy, skill, money, etc are required to invent or create something new. The ultimate idea by which invention or creation took place is an intangible property of the person, who took pains for the invention or creation. Therefore, as per law, legal rights or monopoly rights are given to creator or innovator to harvest the economic benefits on their invention or creation.[5, 6] The Intellectual property rights (IPR) are territorial rights by which owner can sell, buy or license his Intellectual Property (IP) similar to physical property.[7] Although one has to register IPR at legal authority in some presentable or tangible form to claim their benefits. Each type of IPR gives especial rights to its inventor and or creator to sustain and harvest economic benefits which further motivates skill and societal developments.[8-11]

On the basis of type of invention and creation of human mind and their applications the intellectual property rights are classified as follows: i) patents, ii)

†Corresponding author: Email: lalitjajpura@yahoo.com

trademarks, iii) industrial designs, iv) layout design of semiconductor integrated circuit, v) geographic indications of source, vi) copyright and related rights (literary and artistic works, musical work, artistic works, photographic work, motion pictures, computer programmes and performing arts and broadcasting work).[12-15]

WIPO

The World Intellectual Property Organization (WIPO) was incepted in 1967 at Stockholm to protect the IPR throughout the world.[8, 16] Later it becomes one of the agency of United Nation in 1974. WIPO frame works as well as regulate various policies concerned to IPR across the globe. The economic, social and sustainable cultural development with preservation of biodiversities, traditional knowledge through a balance and effective international IP system is main objective of WIPO. Besides this, it is responsible to harmonise differences amongst various countries especially between the developed and developing nations by amending international regulation so that each of them get a equal opportunity in emerging world.[8, 15]

Patent

Patent is an intellectual property right granted to inventor by concerned government office for his novel technical invention.[16] The term invention means solution of any problem in terms of development of a product or a process. Among the different types of IPR, patents are considered the most valuable and rightly so.

The patentability of any invention needs to fulfil following criteria:

1. Usefulness: invention must have industrial applicability or applied for practical purpose.
2. Novelty: invention must be new technology which has not been published or available in prior art of the country or elsewhere in the world before the date of patent filing.
3. Non obviousness: Invention which can be done by any ordinary skilled person is obvious and cannot be patentable. Hence invention must not be obvious for patentability.

As per Section 3 of the Patent Act, 1970 the following are not patentable:

- Frivolous invention
- Invention against the natural laws
- Inventions which are not fair to health of human, animal, plant life, environment as well as contrary to public order or morality
- Discovery of any living thing; discovery of any non living substances occurring in nature; formulation of any abstract theory; discovery of any scientific principle
- Substance or chemical obtained by mere admixture resulting in the aggregation of the properties; mere arrangement or re arrangement of known devices
- Invention relating to atomic energy and related to security of India.

In patenting process at one hand inventor is granted exclusive rights which give recognition as well as financial benefits but at the other hand inventor has to disclose all the relevant information in descriptive way to the patent office at the time of filing patent application. The information available in patent document can be seen by anybody and no doubt it gives direction to other researchers to innovate further in the relevant field.[17] In India, office of Controller General of Patents Designs and Trademarks govern the patent registration process. This office comes under the Department of Industrial Policy and Promotion, Ministry of Commerce and Industry.[18] The patent filing steps are as follows:[19]

Step 1: Filing of Patent Application or Priority Application

There are four patent offices at Chennai, Mumbai, New Delhi and Kolkata (Head office). The applicant has to file patent application in appropriate form with all relevant information concerned to invention such as description, claims, drawing, abstract, etc. Applicant has option to file provisional specification to establish priority of the invention when disclosed invention is only at a conceptual stage. Thereafter, with in 12 month applicant have to file complete specification in prescribed format.

Step 2: Publication of Application

The patent application is published in the office journal after expiry of 18 months. The applicant can also put up request for early publication by paying additional prescribed fee.

Step 3: Opposition of Patent

The pre grant patent opposition, if any may be filed within three months of patent publication. This type of opposition representation is entertained by controller of patent office if patent filing applicant has

put up a request for patent examination. There are also provisions for post grant patent opposition.

Step 4: Request for Examination

The applicant has to apply separately for patent examination within 48 months of filing of patent application with prescribed fees.

Step 5: Examination and Clarification of Raised Objections, if any

The patent examiner check all aspect of patentability i.e. Novelty, inventiveness, non obviousness and industrial applicability and issue First Examiner Report (FER) to the applicant. If objections are there in examination report than applicant has to clarify the objections within one year.

Step 6: Grant of Patent

The patent is granted to applicant by Controller after overcoming the objections raised in examination process. As per Patent Amendment Act 2002, the applicant has to pay renewal fee time to time to keep patent in force. The full details pertaining to Indian patent can be referred to DIP&P website.[19] The patent can be also e filed since 2007.

After getting the rights, the owner can explore these rights by industrial production or can sell, distribute or licensing the rights as per his will. The rights of patent are granted for 20 years. Once a patent expires then the invention enters in to public domain and anybody can use that knowledge.

Compulsory Licences

The Patent Act gives monopoly to inventor to harvest financial gains for invention but contrary in case of national emergency as per Section 92 of Patent Act, 1970 government can issue compulsory licences to third party for non commercial use of public. Beside these when authorised patent owner is not fulfilling the demand of society by will or unable to produce the patentable product or service such as in case of drugs, food, medical equipment, vaccination, life saving equipment, etc the government is fully authorised to allow somebody else to produce patentable product by giving compulsory licence. In this case government is liable to pay fair justifiable economic benefits to patent owner.

Patent Cooperation Treaty (PCT)

The patents are territorial rights; therefore applicant has to apply patent application to patent offices of different countries individually. This practice requires huge amount of investment, time and energy. In the same concern Patent Cooperation Treaty (PCT) concluded in 1970 which provides a facility to file a single international patent application instead of filing several separate national or regional patent applications. Although granting of patent remains under the national or regional patent authorities of various PCT member nations but applicant get the priority date of first filing applicable in all member countries which is more than 145 in number with this single patent application.[16]

Industrial Design

The creative activity of achieving an ornamental or aesthetic appearance of mass produced products or articles is covered under industrial design. The design can be expressed either by two dimensional or by three dimensional forms. The Design Act 1949 of the United Kingdom refers to feature of shape, configuration, pattern or ornament. Broadly, shape, surface, pattern, lines, colour, etc appearance related features of industrial products such as watches, vehicles, mobiles, laptops, different home appliances, buildings, textile designs or handicraft products are covered under industrial design. The aesthetic value or how a product appeals is the main concern in selling besides its technical quality and other aspects.[20]

To be protected under most national laws, an industrial design must be new or original and non-functional. Hence industrial design is only concerned with aesthetic features and any technical features or aspects of the product to which it is applied are not protected by the design registration. Although the technical features, if are novel could be protected by getting the patent.[8] Beside these, design which is literary or artistic in character such as cartoon, label, leaflet, map, dressmaking pattern, etc is protected under copyrights instead of industrial design.

The term of industrial design rights vary from country to country from 10 to 25 years. In India as per Design Act, 2000 duration of protection of industrial design is for 10 years. This duration can be extended further for 5 years.

An industrial design encourages creativity and skill development amongst the individual and manufacturing sector by promoting more aesthetically pleasing products for the society. The design and shape of the product not only create aesthetic appearance but in case of machine, furniture, automobile, etc design is also indirectly associated with ergonomics and plays a major role in customers' comfort.

The patent offices at Chennai, Mumbai, New Delhi and Kolkata also deal with industrial design. The patent office, Kolkata maintain the register of design as statutory requirement of all concerned information of filed industrial design.

Trademark

Trademarks already existed in the ancient world. The Indian crafts men used to engrave their signature on their jewellery or artistic creation around 3000 years ago. With industrialisation the trademark become key factor in modern world of international trade. A trade mark is a distinctive sign or logo that denotes about the particular item is produced or provided by a specific person or industry or enterprise. Similar to trademark, service mark distinguish service providing enterprises with their competitors. A company may have different types of trademarks for their various products but to distinguish themselves from other company or enterprise trade name is being used. [8]

Trade mark or trade name helps companies to make their recognition, reputation and trust amongst the customers. In most of the cases, consumers rely on trademarks where it is difficult to inspect a product or service quickly to determine its quality. [21-22] A particular segment of customers is very much concerned about the brand and pay heavily for brands prestige even for similar sort of quality to distinguish themselves from the crowd.

A trademark/ service mark comprises of words (name, surname, geographical name, slogan, etc), letters and numerals, drawing, logo, symbol, phrase, image, design or a combination of these elements to distinguish a business or service from the other. Beside these, there are certain other 'non-traditional' trademarks as follows[9]:

Smell or olfactory marks: the smell of fresh cut grass for tennis balls, the odour of beer for dart flights and roses for tyres have been registered in the UK.[23] Similarly, fresh floral fragrance reminiscent of Plumeria blossoms was registered in US for sewing thread and embroidery yarn. [24, 25]

Audible sign or Sound Marks: the distinguished sound marks in form of musical note can be registered as sound mark. The NBC successfully registered the musical notes as a trademark in 1950 for its radio broadcasting services. The lion's roar is also registered sound trademark for MGM.

Coloured marks: this category includes words, devices with their colour combination or colour as such. Similarly few taste and shapes (three dimensional signs such as the three pointed Mercedes star) as non traditional trademarks can be also registered in some specific cases.

Important Criteria of Trademark Registration

As per UK Trademarks Act, 1994, the three main requirements for registering a trademark are as follows:[26]

a) The trademark should be a sign or anything that can convey information.
b) The sign should be capable of distinguishing products or services of one undertaking from that of another. This is clearly a requirement of distinctiveness of trademarks.
c) The trademark is capable of graphical representation to provide precise identification in the trademark registry.

Broadly Followed Rules of Trademark Registration[11]

- The word "apple" or an apple device can not be registered for apple as in this case it is not distinguishable. But it is registered being highly distinctive in case of computers.
- Similarly Camel trademark is registered for cigarettes. The generic term like "furniture" cannot be registered as trademark for chair, table, or similar type of items. [11]
- In case of use of letters or numerals, in certain countries registration is allowed only when at least few numbers of letters and/or numerals are combined or in case of letters the combination of word is pronounceable.
- Similarly, common surnames are not registered in some countries as they are not distinctive in nature.
- Beside these, deceptive sign or trademark which is misleading or violates the public order or morality is not qualified for registration.
- The signs which are reserved for state, public institution, organisation or international body cannot be registered as trademark.

Indian Trademarks Act

The Indian trademarks act specifies that any mark which is distinctive i.e. capable of distinguishing goods and services of one undertaking from another and capable of being represented graphically can be trademarks. [27]

Since trademarks do not grant exclusive right that could be exploited, there is no need to limit their validity. But without time limit, trademark validity

would lead to unnecessary number of registered trademarks without any applicability. [11] In India, the initial term of trademark registration is for 10 years and thereafter it has to be renewed from time to time. The applicant can apply for trademark registration at Trade Mark Registry Office, Mumbai (head office), Delhi, Kolkata, Ahmadabad and Chennai.

Infringement of Trademark

Infringement occurs when someone else uses a trademark that is same as or similar to a registered trademark for the same or similar goods or services. In case of infringement false product is passed off to customer in impression of genuine product, thus term "passing off" is also used for such type of practices. The "passing off" product is very detrimental for trade as it takes away market share of genuine producers as well as customers are also cheated by receiving the sub quality product. On receiving sub quality product, without knowing the fact of "passing off", customer may choose some other trade mark in future with false impression that manufacture is producing inferior quality product. The imitation product in trade is also known as counterfeited product.

Collective and Certificate Marks

In certain countries collective marks and certificate marks are used to indicate that enterprises' product possesses particular standards. For example in case of textile chemical processing (dyeing and printing), a group of companies which strictly uses herbal or eco-friendly chemicals can think of some collective marks beside their individual trademarks. The ISO, hallmark, wool mark, etc are few example of the collective/certificate mark. Thus, certificate marks; safeguard the customer's interest by helping them to choose the quality product amongst the misleading products.

Layout Design of Semiconductor Integrated Circuit

In present era, life cannot be thought of without electronic gadgets ie. mobile or smart phone, laptops, computer, watches, cameras, safety or health care devices, home appliances, etc. All appliances are very compact now a day due to their integrated circuits. Beside these, most of the instruments having microprocessor base control or operating system made up of integrated circuits or layout designs. These designs of circuit are creations of human mind as a consequence of enormous investments and efforts of highly qualified experts. Whereas copying of these designs by some other party is lethal setback for electronic research organisations/ industries.

'Layout-design means three-dimensional disposition of the elements in which at least one element is active, and or some of all having interconnections as an integrated circuit, or such a three-dimensional disposition prepared for an integrated circuit planned for industrial manufacturing. [28-30]

The treaty on Intellectual Property of Integrated Circuit (IPIC) was carried out at Washington DC in 1989, which is open for all WIPO members. As per treaty the protection is provided to layout design up to 10 years from the date of filing an application, but member country may provide protection up to 15 years from the creation of layout design.[11]

In India, Semiconductor Integrated Circuits Layout-Design (SICLD) Act, 2000 was passed to protect the requirements of electronic industry in compliance with TRIPS agreement.[12] The act was implemented by Department of Information Technology under Ministry of Information Technology. Any original and inherently distinctive lay out design can be registered as per the Indian SICLD Act, 2000 for 10 years.

Trade Secrets

Any invention or knowledge which in not innovative (not patentable) but useful for business and provides economical benefits can be kept as trade secret. Beside this novel or creative information is also kept as trade secret when registration of patent, copyright, industrial design, etc are pending or in process. [31]

The technological information or process such as recipe, idea, device, software, blue prints, pattern, formula, maps, architectural plans and manual or any commercial information or business strategy or secret in form of any data compilation or data bases, marketing plans, financial information, personal records, etc can be kept as trade secret. [32]

This right has great potential in ripening secret knowledge into economic gains. Therefore, majority of companies are protecting their technologies by trade secret rather than patent. Trade secrets act as an incentive to incremental innovation in technology not meeting the non-obviousness of patent law and copy rights.

The process of evolving a trade secret takes years of experience, research and skill. The composition of Coca-Cola is a good example of trade secret for its recipe. In certain countries there are specific rules for

trade secret such as Unfair Competition Prevention Act in Japan, Uniform Trade Secrets Act in the United States of America.

The TRIPS Agreement recognises trade secrets under 'undisclosed information' but only forms of expression of under common law, law of contract, etc. [33-35]

Geographical Indications

Applications of geographical or locality origin to identify goods for trade purpose is not a new phenomenon. Certain agricultural products have especial qualities that are influenced by geographical climate or soil. "The term Geographical Indication (GI) has been chosen by WIPO includes all existing means of protection of such names and symbols, regardless of whether they indicate that qualities of a given product are due to its geographical origin (such as appellations of origin), or they merely indicate place of origin of a product (such as indication of source).[11]

The Champagne, Havana, Darjeeling tea, Arabian horses, Alphanso Mango, Nagpur orange, Basmati, etc are some well known examples for names which are associated throughout the world for their product having specific quality and registered as GI. Similarly in the field of handicrafts, textiles, etc., specific qualities of the products are related with human factors and their skills.[36] The reputation of products is built up and maintained by masters or creators of that skill belonging to a particular region or locality in best suited climate. The skill is passed traditionally from one generation to the next with great cautions and compromises by particular tribe or region. The, Dhaka muslin, Venetian glass, China silk, Mysore silk, Chanderi sari, Kanchipuram silk saree, Kullu shawls, Solapur chaddar, Solapur Terry Towel, Kashmiri handicrafts**,** etc are well known examples of Geographical indications for state of the art craftsmanship.[7, 37]

In India, registration of such products can be done under Geographical Indication of goods (registration and protection) Act 1999 and Geographical Indication of goods (registration and protection) rules 2001. The GI act is administered by Controller General of Patents, Design and Trade Marks, the registrar of GI. The central government has established "Geographical Indication registry" at Chennai where right holders from all Indian jurisdictions can register their GI. Under these rules protection under GI is granted for 10 years and renewal is possible time to time for further 10 years.

Copyrights and Related Rights

Copyrights protect expression of idea of author, artist and other creators which is concerned with mass communication. It protects only forms of expression of idea, not the idea as such. Development of any country or society depends upon creativity of their people.[14, 38] Thus copyright encourage such type of activities. The following literary and artistic works are covered under copyrights: [39, 40]

Literary and scientific works: novels, poems reference works, newspapers, plays, books, pamphlet, magazine, journals, etc.

Musical work: songs, instrument musical, choruses, solos, bands, orchestras, etc

Artistic works: such as painting, drawings, sculpture, architecture, advertisements, etc.

Photographic work: portraits, landscape, fashion or event photography, etc

Motion pictures: it includes the cinematography works such as film, drama, documentary, newsreels, theatrical exhibition, television broadcasting, cartoons, video tape, DVDs, etc

Computer programes: computer programmes, softwares and their related databases,

Maps and technical drawings

Right of Reproduction and Related Rights

A closely associated field is "related rights" or right related to copy right that encompass rights similar to those of copyright. The rights covered under related rights are performer's rights (such as actors and or musicians) in their performance; producers of phonograms (for example, compact discs of films or sound or compositions) their recording and broadcasting in radio and television programs.

The WIPO Performance and Phonograms Treaty (WPPT) which was adopted in Dec 1996 and came into force on May 20, 2002, provides that definition of performer for purposes of treaty includes performer of an expression of folklore.

One gets copyright automatically after completion of work by virtue of creation, hence it is not mandatory to register copyright. However, registration of copyright provides evidence that copyright exist in work and creator is genuine owner.[41, 42]

Copyright for Computer Software

In concern to computer software, the Indian Copyright Act, 1957 was amended in 1994 which

came in to effect from 10 May 1995. As per this act without permission or authorisation making copies and distribution of software is criminal offence. Although, this act gives, rights to authorised users to make at least backup copies of the software or any other computer programs.[43]

The registration of copyright is carried out under the Indian Copyright Act, 1957. Recently the act was amended in 2012 known as The Copyright (amendment) Act, 2012. As per rule, author gets copy rights just after creating its work without any formality but work can be registered at Register of copyrights maintained in the Copyright office of Department of Education as prima- facie evidence.

Copyright Duration

In India copyrights exist for 60 years for literary, dramatic, musical and artistic works after the death of creator. In case of photograph, film, sound recording copyright term is 60 years from the beginning of calendar year next following year in which it is published or released. Besides these, author also gets moral rights for its creations.

Copyright Infringement

The copyright infringement means making, selling or taking financial benefits of copyrighted work without permission of copyright owner. It is a criminal offence and as per the act, minimum punishment for infringement is imprisonment for six month with a minimum fine of Rs 50,000/-.

Plagiarism

When work of someone else writing is taken without permission and claimed as one's own work than it is known as plagiarism. Although, facts which are known as common knowledge are not covered under the copyright law and hence can be used by anybody. As per copyright, fair justifiable use of some other work is allowed by paraphrasing the text or by using quotation mark with giving appropriate reference or citation in credit of the original author.

IPR in Context to Traditional Knowledge and Biodiversity

"Traditional knowledge (TK) means innovation and practices of indigenous and local communities embodying traditional life styles; wisdom developed over many generations of holistic traditional scientific utilisation of lands, natural resources, and environment. The use of turmeric, neem, tulsi, etc herbs in day to day life as per ritual is very well known example of traditional knowledge existing in India."[7]

The US patent was granted to University of Mississippi for use of turmeric in wound healing; European patent was granted to W. R. Grace and Company for its discovery of fungicidal effects of neem oil; the agro-biotech giant, Syngenta, attempted to take rights of thousands of rice variety which already existed in India. These all are few examples of biopiracy in which rights have been cancelled after wards in favour of genuine owner of Traditional Knowledge. The rights related to TK such as cultivation practises, medicinal uses of plants or herbs and plant varieties as well as their genetic resources are covered under the Sui generic means unique systems of land of law or region as they are not covered or fit under standard IPR systems.[7]

WIPO Convention on Biological Diversity (CBD) took place in 1992 with a prime goal of conservation of biodiversity, sustainable use of its components and equitable sharing of the benefits occurring due to utilisation of traditional genetic resources. India being a member of this convention passed following legislation in the parliament to protect traditional knowledge and farmer's rights[44]:

The Protection of Plant Variety and Farmers' Right Act 2001 (PPVFR Act)

This act recognises the individual and community roles played by farmers and their interests in improvement and conservation of varieties. This sui generis law has a blend of IPR savvy and public interests provisions hence harmonise the balance between farmers and giant seeds manufacturing or genetically advance research labs and marketing companies.[45]

The Biological Diversity Act 2002

Biodiversity includes millions of races, local variants of species and sub-species, mainly recognised as genetic, species and ecosystem. As per estimation, global biodiversity has 1.75 million identified species.[46] The convention on biological diversity (CBD) states that a member country should facilitate access to its genetic resources by other parties on mutually agreed terms, but the access requires prior information consent (PIC) of country providing the resources. It also has provision to provide an equitable sharing of any profit on commercialisation of traditional knowledge to local people subjected to domestic legislation.

"The rank of India in farm output is 2nd among the world and around 60% of India's population depends on this sector for rural development."[47] Thus, the biological diversity Act 2002 protects the rights of huge population of India especially farmers, their resources and raw materials such as seeds, fertilizers, pesticides, etc. It impacts the agriculture production, farmers' livelihoods as well as sustainable use and equitable sharing of benefits in positive direction.[48] The centre government has also established the National Biodiversity Authority (NBA) in 2003 for proper implementation of the biological diversity Act 2002.

The Patent Amendment Act, 2005

The Act (Section 3) states that 'a mere new use for a known substance' and invention which, in effect, is traditional knowledge or which is and aggregation or duplication or known properties of traditionally known component or components will not be an invention. These provisions in the Acts prevent misappropriation of the TK and its applications available in public domain in India.

IPR Status of India

The World Bank carried out survey concerned to Knowledge Economy Index (KEI) of 140 countries across the world on the basis of their knowledge based initiative, policy frame work, economy incentive and institutional regime, information and communication technologies (ICT) infrastructure in 2007. India ranked at 101st position due to lack in aforesaid parameters.[3, 49]

Similarly, India ranked at 14th, 9th and 13th position in patents, marks and designs respectively based on total (resident and abroad) IP filing activity by origin in 2014.[50] Rankings are based on the total numbers of applications filed by origin. The worldwide participation in IPR filing activity in 2014 of few leading countries in comparison to India is shown in Table 1. It can be analysed that India's worldwide participation in IPR filing activity is mere 1.6%, 3.14% and 0.82 % for patent, trademarks and industrial designs, respectively. The participation is even less if only resident applicants are considered as indicated in the Table 1.

Unawareness amongst youth, academicians, researchers, industrialists and traders in India about IPR and its benefits is the main reason for lagging behind in IPR participation. Even, Micro, Small and Medium Enterprises (MSME) that constitute around 95% of all units; 40 % of total value addition; nearly 80% of the employment of the total manufacturing sector; and 35 % of total exports are also lacking in IPR edge.[54, 55] Due to aforesaid reasons, there is no Indian multinational company in top 100 patent applicants worldwide during 2003-12.[56] Indian industries can survive if they prepare themselves as

Table 1—IPR filing activity of India in comparison to few leading countries in 2014

Type of IPR activity	Name of the nation	Applications filed	% Share
Patent[51]	China	9,28,177	34.62
	USA	5,78,802	21.59
	Japan	3,25,989	12.16
	Republic of Korea	2,10,292	7.84
	European patent office	1,52,662	5.69
	Germany	65,965	2.46
	India	42,854 (RA:12,040; NRA 30,814)*	1.60
	Total Applications worldwide	26,80,900	
Trademarks[52]	China	22,22,680	29.84
	USA	4,71,228	6.33
	OHIM (EU Office)	3,33,443	4.48
	France	269,837	3.62
	Japan	242,073	3.25
	Russian Federation	241,542	3.24
	India	2,33,653 (RA: 2,00,137; NRA 33,516)*	3.14
	Total Application class counts worldwide	74,49,400	
Industrial Designs[53]	China	564,555	49.59
	OHIM (EU Office)	98,273	8.63
	Republic of Korea	68,441	6.01
	Germany	61,054	5.36
	United States of America	35,378	3.11
	Japan	29,738	2.61
	India	9,309 (RA: , 168; NRA 3,141)*	0.82
	Total Application class counts worldwide	1,138,400	

"Patent data refer to numbers of equivalent patent applications. Mark data refer to numbers of equivalent trademark applications based on class counts – the number of classes specified in applications. Design data refer to numbers of equivalent industrial design applications based on design counts – the number of designs contained in applications."

*RA: Resident Applicants and NRA: Non Resident Applicants

per the local as well as global IPR needs as a strong IP portfolio makes a good business sense by securing loans, enhance market image, attract good alliances and investments.[57] Thus, there is a dire need to develop appropriate guidelines to rationalize IP strategy.[4] Definitely, India has the potential and skills to emerge as global leader if appropriate IPR strategy is practiced to improvise its share in global trade.

Conclusion

In knowledge based economy, intellectual property rights are very much essential for progressive societal development. The IPR is basic necessity to be a part of local as well as global competitive trade as without dissemination of IPR knowledge and implementation, creating the innovative environment is really impossible. It is essential for policy makers to include IPR in basic educational system and promote IPR registration by encouraging the innovators and creators. India is having all the resources in terms of available raw material, cheap labour, innovative and creative dedicated manpower. No doubt that India and other developing countries will definitely harness its proportionate share in global trade by exploration in Intellectual Property Rights.

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