

Bulletin of Business and Economics, 13(3), 282-289 https://bbejournal.com https://doi.org/10.61506/01.00489

Intellectual Property Laws in Pakistan

Muhammad Waqas Gujjar¹, Syyad Arslan Hussain², Attiya Anees³, Tahir Mahmood Gondal⁴

Abstract

Copyright, patents, and trademark laws are some of the branches of intellectual property rights that seek to prevent people from using other people's work and ideas without their permission. To numerous creators and companies, it is a valuable and often undertapped resource, namely, intellectual property. These laws help protect the works created and invented by individuals, and they can commercially benefit from their work. As a WTO member-state, through its participation in the Marrakesh Agreement that was signed on April 15th, 1994, Pakistan has had to standardize its IPR regimes in compliance with WTO norms. The WTO, effective January 1, 1995, expects signatory nations to enforce IP rights higher than agreements to the GATT. As a result of WTO reiterated protection standards, Pakistan has had to revise and modify its intellectual property regime to accord with the WTO stipulations. **Keywords:** Intellectual Property Rights, National Law of Pakistan, International Instruments, Protection of Property Rights and International Standards

1. Patents

Pakistan is a member of WTO, and it has signed TRIPs, which require certain legislation on patents in Pakistan to be reformed in accordance with international standards. On July 22, 2004, Pakistan also became a member of the Paris Convention for the Protection of Industrial Property, known as 'the Paris Convention.' (Anwar, 2022) Consequently, the Patents Ordinance 2000 was enacted on December 2, 2000, replacing the Patent and Design Act of 1911 (II of 1911). This new legislation establishes the Pakistani government's compliance with the Paris and TRIPs conventions and Pakistan's desire to continue to advance its patent law in accordance with international progress. (Mansoor, Intellectual Property Law and Globalization, 2005).

The Patents Ordinance of 2000 showed a move towards protection of product per se patents, especially in agriculture and pharmaceuticals, which came into force on the 1st of January 2005. But till today, Pakistan has kept its status the same concerning the Patent Cooperation Treaty PCT, which deals with international applications for patents. When a patent application is submitted, it is processed to check if it satisfies all legal requirements, such as non-obviousness, novelty, and industrial use. If an application does not meet these requirements, the applicant can appeal the decision to the High Court within ninety days of receiving the rejection notice. (2000,2000) Successful applications are published in the Official Gazette, where interested parties have 120 days from the publication date to oppose the patent by filing a notice with the Controller of Opposition. If no objections are raised, the patent is granted (2000,2000). Supreme Court of Pakistan extended the protection of Patents to Chemical formulation. (Shell Pakistan versus ExxonMobil Chemical Pakistan Limited, 2015)

Patents in Pakistan are subject to compulsory licensing if certain conditions are not met. Specifically, if the patent owner fails to commence commercial working of the invention within four years of the filing date or three years from the patent grant date, or if the working ceases for two consecutive years, or if the patent's use does not meet local demand, or if the owner refuses to license it on fair terms, compulsory licensing may be imposed. Note that the importation of products made using the patent is not considered a valid use for these purposes.

The Implementing Regulations require that novelty be examined in detail, acknowledging that any public disclosure of the invention—whether oral, written, or through use—that allows understanding of the invention is considered prior art. The law also ensures the protection of technical information from misuse or unauthorized disclosure. Legal provisions are in place to protect the rights of patent holders from infringement. Under the Patents Ordinance of 2000, patents are granted in four distinct categories; ensuring comprehensive protection for a variety of innovations. Patents under the Patents Ordinance of 2000 fall into four categories:

- 1. Standard Patent: Effective from the official date of the patent application.
- 2. Chemical Goods Patent: Covers chemical products intended for medical and agricultural applications.
- 3. **Priority Patent**: Recognizes the priority of a patent application filed in a WTO member country, dating from the original filing date.
- 4. Addendum Patent: Modifies or improves upon a previously filed or granted patent.

Patents are valid for 20 years, with annuities required starting from the fourth year of the patent term and continuing annually from the fifth year onward. Patents can be licensed or assigned. However, assignments must be registered with the Patent Office and published in the Official Gazette to be enforceable against third parties. (Abu-Ghazeleh, 2017).

2. Patent Term

Under the Patents Ordinance of 2000, the term of a patent is 20 years from the date of filing. (2000, 2000) This represents an extension from the previous legislation, which provided a term of 16 years. (Associates A.)

2.1. Relief for Infringement

The Ordinance empowers the Court to provide remedies in patent infringement cases. Remedies may include compensation, injunctions, or damages, depending on the case. The Court is also authorized to impose interim measures to protect patent rights effectively.

2.2. Penalties

The violation penalties are listed under section XIX of the Ordinance. Any person who commits an offense against rules with

¹ Lecturer, School of Law and Policy, University of Management and Technology, Lahore, Pakistan, muhammad-waqas@umt.edu.pk

² PhD Scholar, University of East London, London, United Kingdom, syedarslan7777@gmail.com

³ Corresponding Author, Lecturer, College of Law, The University of Lahore, Lahore, Pakistan, <u>attiya.anees@law.uol.edu.pk</u>

⁴ Advocate Supreme Court of Pakistan, <u>tahirgondalaag@gmail.com</u>

connection to inventions, practices cheating in relation to entries in official registers or other representations, uses the term 'patent office,' or fails to furnish information required or gives false information in respect of registration as a patent agent is guilty of an offense. These penalties may consist of fines, imprisonment, or a combination of the two considered appropriate in accordance with the gravity of the offense. (Mansoor, Intellectual Property Law and Globalization, n.d.)

For an invention in Pakistan to be patented, it has to meet certain characteristics, which are as follows;

- **Process or Product**: It must be either a process or a product.
- Novelty: The invention must be new or original.
- Inventive Step: It must involve an inventive step that is not obvious to someone skilled in the field.
- **Industrial Applicability**: It should be applicable in industrial settings(2000, 2000).

Patent applications are assessed in terms of the technical and legal requirements provided for under the Patents Ordinance, 2000, and the relevant rules.

2.3. Exceptions & Non-Patentable Inventions in Pakistan

Under the Patents Ordinance of 2000 in Pakistan, certain categories are not considered patentable inventions. These include:

- Mathematical Methods and Scientific Theories: Concepts such as mathematical formulas, scientific theories, laws of nature, or discoveries.
- Aesthetic Works: Literary, theatrical, musical, artistic, or other creations with purely aesthetic value.
- Plans and Techniques: Mental processes, games, business methods, or guidelines for carrying out actions.
- Data Display and Software: The mere presentation of data or computer programs.
- Naturally Occurring Entities: Discoveries that exist in nature or are merely isolated from it.

Additionally, patents will not be granted for:

- Contrary to Public Order or Morality: Inventions that may harm human or animal health or well-being.
- **Biological Processes**: Methods related to the production of plants or animals using biological processes rather than microbiological or non-biological ones.
- Medical Procedures: Surgical, therapeutic, or diagnostic methods for humans or animals.
- New Uses for Known Products: Innovations involving new or improved uses of already known products or processes.
- Minor Modifications: Simple changes to the external form of a chemical product. (2000, 2000).

2.4. The Patent Office

Established in 1948, the Patent Office is part of the Ministry of Industries and Production of Pakistan. It was created under Section 55 of the Patents & Designs Act of 1911. This Act has since been amended to align with the TRIPS agreement, leading to the enactment of the Patents Ordinance, 2000, and the Registered Designs Ordinance, 2000. Additionally, the "Registered Layout-Designs of Integrated Circuits Ordinance, 2000" governs the registration of integrated circuit layout designs. Since April 2005, the Patents Office has been integrated into Pakistan's Intellectual Property Organization (IPO). (Abu-Ghazeleh, 2017)

2.5. Copyrights

Copyright law provides creators of literary, artistic, and other intellectual works with the exclusive right to control how their creations are used. This legal protection urges authors and artists to produce more works by promising them certain financial remunerations. (Sharif, 2008).

i. Historical Development: After the formation of Pakistan in 1947, the laws which were adopted were the British Copyright Act of 1911. (1911) This Act was later [replaced] by the Copyright Ordinance of 1962. (1911)

ii. Copyright Office Establishment: The Copyright Office was set up in Karachi in 1963, and registration of the work started in the same year. (Paypro,2021) The first set of Copyright Rules was established in 1967. (1967) However, new rules were established in 2002 due to ever-changing requirements.

iii. Further Developments: To strengthen the copyright dispensation, the International Copyright Order of 1968 (WIPO, The International Copyright Order 1968) and the Copyright Board (Procedure) Regulations of 1981 were enacted. (WIPO, The Copyright (Procedure) Regulations, 1981). A branch office was later established in Lahore in 1984.

iv. Integration with IPO-Pakistan: Since 2005, the Copyright Office has been a part of IPO-Pakistan, streamlining intellectual property management under a unified body.

2.6. International Agreements

Pakistan has ratified several key international agreements to strengthen its copyright and intellectual property laws:

- The Berne Convention for the Protection of Literary and Artistic Works: This convention mandates that member countries provide the same level of protection to foreign works as they do to their own. The principle of national treatment underpins this agreement, ensuring that works from other member states are treated equivalently to domestic works.
- The 1952 Universal Copyright Convention: This convention, designed to complement the Berne Convention, extends copyright protection internationally and facilitates the exchange of works across borders. (WIPO, Universal Copyright Convention of 1952, 1952)
- The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS): Effective from January 1, 1995, TRIPS is overseen by the World Trade Organization (WTO). This agreement covers virtually all aspects of industrial property consisting of industrial designs, integrated circuit layout designs, geographical indications, trade dress, patents and namely plant patents, trademarks and protection of top secrets and testing information. TRIPS also outlines measures for the settlement of disputes, enforcement, and available remedies on issues concerning intellectual property rights. (organization)

Following these international treaties and having updated national legislation, Pakistan makes its laws on intellectual property consistent with the norms of the international community, supporting the protection and development of creative and innovative works.

2.7. Copyright Registration

Copyright protection in Pakistan is governed by the Copyright Ordinance of 1962, amended by the Copyright Ordinance Amendment Act of 2000. This protection does not consider the nature, importance, or utility of the work being done. It embraces written production as writing, music and lyrics, graphic design, images, photographs, movies, industrial design, books, speeches, oral histories, scripts of plays and other dramas, and musical scores. If an author decides to be protected by a copyright, then this protection is active during the author's lifetime and for fifty years after the author's death.

The Pakistani legal system provides for civil and criminal actions against copyright infringement. (WIPO, Universal Copyright Convention of 1952, 1952) Other remedies include injunctions and monetary damages as well as fines, and in severe cases offender may be subjected to imprisonment. Consequently, enforcement measures such as police raids can be used to help correct the violations as well. To ensure the legal systems of the country rule, the copyright laws of Pakistan have signed major international conventions such as the Berne Convention for the Protection of Literary and Artistic Works and the Universal Copyright Convention. (Abu-Ghazeleh, 2017).

2.8. Term of Protection

For any literary, dramatic, musical, or artistic work other than photographs, the term of copyright protection is the life of the author plus fifty years. This period starts from the first day of the subsequent year to the death of the author of the concerned work. Specific terms such as photographs may be used depending on the definition of the ordinance. (Mansoor, Intellectual Property Law and Globalization, 2005)

2.9. International Copyrights

The Federal Government of Pakistan may grant protection to copyrighted material originally published abroad, provided there are mutual copyright treaties. Through a notification in the official gazette, the government can extend the provisions of the Pakistani Copyright Ordinance to these foreign works as though they had first been published in Pakistan. This approach makes sure that Pakistani copyrights are protected worldwide, which is also a true manifestation of the sovereign's commitment to obey international copyrights. (Associates K. K., n.d.)

2.10. Civil Penalties for Infringement

When there is a copyright infringement, the copyright owner or the exclusive licensee is bound to receive several legal reliefs. These remedies may encompass profit stipends, damages, and prohibitory measures to prevent further infringement. Were the infringer able to prove that he did not know about the copyright, he might be confined to an injunction and a decree for the profit realized from the infringing copies. (1962, 2023)

Moreover, copyright owners can also apply for interim injunctions to restrain the infringing activities and to secure any evidence of the infringement. This action can be undertaken even if the legal processes have yet to start since the legal process will offer a complete solution to the case. At the same time, other harm is being investigated and prevented.

2.11. Criminal Penalties for Copyright Infringement

In Pakistan there are very strict laws of copyright infringement for those people who act deliberately for this purpose. They are considered cognizable and non-bailable offenses, implying that they can be investigated and prosecuted by the police and taken to court. Possible punishments include imprisonment, fines, or both, depending on the degree of the violation committed. Such penalties are imposed to ensure compliance with copyright laws and avoid copyright infringement. (Mansoor, Intellectual Property Law and Globalization, n.d.)

2.12. Steps for Copyright Registration

Some of the critical steps that need to be followed while getting copyright registered in Pakistan are as follows.

- Filing of Application: The first step is, therefore, submitting a completed application form to the appropriate authorities.
- **Examination:** Checks are made whether the application contains all required information.
- **Publication in Newspaper (for Artistic Works):** The changes in artistic works must be published in a newspaper to bring to the awareness of the public about the application.
- **Opposition:** If there are adverse remarks concerning the application, they have to be rebutted.
- Issuance of Certificate: Following these steps, when there is no objection, the Registrar grants a registration certificate.

2.13. Achievements

IPO-Pakistan has so far done a commendable job in the field of copyright management:

- **Online Accessibility:** The IPO website has now made it easier for users to download copyright application forms for easy use.
- Software Development: A software system has been designed for managing accounts and processing applications.
- **IT Infrastructure:** In 2009, a modern IT section and server room were set up, which improved the technological factor of the office.
- Acknowledgment System: Candidates can receive a file number and an automated receipt upon submitting their application to the commission.
- **Data Management:** The analysis of the data indicates that out of the total data, 96% has been collected and processed after the commencement of copyright registration in 1967.
- **Digitization Efforts:** The Copyright Office has been digitizing and scanning records of records since the year 2008. More than fifty-two thousand copyright files and forty-two thousand artistic works have been affected by the Copyright Administration System (CAS).
- **Network Integration:** At Karachi, the Copyright Office is currently in a position to connect through the Virtual Private Network (VPN) with IPO-Pakistan Lahore regional office and IPO-Pakistan Islamabad head office for efficient data entry as well as direct access to the CAS.

These advancements are evident in IPO-Pakistan's continued efforts to enhance copyright administration and protection.

3. Trademarks

The Trademarks Registry (TMR) is one of the divisions of the Intellectual Property Organization of Pakistan (IPO-Pakistan) that deals with the registration of trademarks and service marks in accordance with the procedures outlined in the Trademarks Ordinance, 2001. The regulatory authority of TMR is limited to the nation's territory, as it is a federal body. It works on a civil court basis, and its decision can be further referred to the provincial high courts. Under it, there is a Registrar for The Registry, and the principal office of the Registry is in Karachi while having a branch office in Lahore. (Abu-Ghazeleh, 2017).

The Trademarks Ordinance 2001 was passed on the 13th of April in the year 2001, which was a move from the Act of 1940. This new law complies with the WTO requirements of Pakistan and incorporates new concepts and trends in trademark law, which were outside the previous laws. They also stipulate that the Ordinance is meant to expand the range of protection, streamline registration procedures, and strengthen measures for compliance. (Mansoor, Intellectual Property Law and Globalization, n.d.)

Pakistan follows the International Classification of Goods and Services for the Registration of Marks, according to the Nice Agreement. This category consists of tangible products, which are classified from 1 to 34, and intangible ones, covering services ranging from class 35 to 45. To register a trademark, an application has to be filed at the Pakistan Trademark Office, where it is processed. Any individual or entity opposing the registration can file a notice of opposition within two months of the publication date or within a period specified by the Registrar, not exceeding two months.

The initial term of trademark registration varies based on the application date. For trademarks filed before April 12, 2004, the registration is valid for seven years and can be renewed for an additional 15-year term. For trademarks filed after April 12, 2004, the registration is valid for ten years, with the possibility of renewal for another 10-year term. Renewal fees can be paid any time before the last six months of the current registration period. Late renewals are permitted within four months of the registration's publication in the Trademarks Journal, subject to an additional fee.

Trademark assignments, including transfers with or without business goodwill, changes in name or address, registered user agreements, and licenses, are allowed (Abu-Ghazeleh, 2017). Amendments to the registered trademark are also permitted, provided they do not alter the mark's nature or expand the list of goods or services. These amendments must be recorded in the official register. While there is no requirement to use a trademark at the time of applying, proof of use is necessary to maintain registration during renewal. Suppose a trademark has not been used for five years and one month from the registration date. In that case, any interested party may seek expungement of the trademark from the register by applying to the Registrar or the High Court.

In terms of offenses associated with trademark misuse, the Trademarks Ordinance outlines a number of criminal acts. This involves using terms which is Keywords similar to a registered trademark without permission, imitating registered trademarks, affixing a trademark to goods without the owner's permission, and selling goods with fake trademarks. The deceptive use of trademarks creates a violation of law. (Bata Pakistan Limited versus M/S Shoe Company, 2010) Sanctions for these infringements can be sought before the District Court and the High Court. (Abu-Ghazeleh, 2017). The Trademarks Ordinance of the year 2001 has updated the trademark laws of Pakistan to effectively address the international standards for trademarks and improve the processes of protection and realizing the rights for trademarks. The changes in the procedure and updates seek to ensure an easier registration process, better legal protection against infringement, and integration with international standards in Pakistan.

3.1. Trademark Term and Protection in Pakistan

According to the Trade Marks Ordinance of 2001, trademarks in Pakistan are registered for a period of 10 years from the date of registration. (Mansoor, Intellectual Property Law and Globalization, n.d.) Not only does this ordinance gives citizens more understanding of how to register for trademarks, but it also gives strong protection to famous trademarks.

3.2. Protection of Well-Known Trademarks

The Ordinance equates the notion of "dilution" to well-known trademarks, whereby the trademarks receive protection under the law. It has been mentioned that well-established marks are protected not only in Pakistan but in the international territory. This means that when analyzing whether a trademark can be considered well-known, its status across the globe is taken into account, including the times when it is not actively used in Pakistan. This provision is in consonance with the Paris Convention requirements so that protection being accorded to the well-known trademarks is as per the international requirements. (Mansoor, Intellectual Property Law and Globalization, 2005) Pakistan is a signatory to this convention.

3.3. Functions of the Trade Marks Registry

Trade Marks Registry enjoys immense importance with the new responsibilities that it was given on the passing of the Trade Marks Ordinance, 2001, which is not only limited to registering trademarks. Education on IPRs: The Registry now bears the mantle of educating the public on Intellectual Property Rights. It plays an active part in the business community, compelling them to fend for its trade and service marks, thus creating a platform for fair business.

In order to perform these functions, the Trade Marks Registry is comprised of several specific sections, all of which are crucial to the registration of trademarks:

- Reception Desk: This is the first interface where applications are processed and queries addressed, often by a receptionist.
- **Data Capture Section**: Here, details concerning the trademark applications are captured in the system to facilitate record keeping.
- **Examination Section**: This is a crucial section where all trademark applications go through a rigorous check to conform to all legal requirements.
- **Journal Section**: This section is responsible for publishing the Trademarks Journal, which includes all accepted applications. By making this information public, the Registry ensures transparency and provides an opportunity for any interested party to oppose the registration of a mark.
- **Opposition Section**: When a trademark has been filed, and another party has an issue with it or does not want the trademark to be registered, then this section deals with the opposition. The oppositions must be filed with the controller within a period of two months from the date when the mark was published in the Trademarks Journal. There is an opponent who presents

the case of why the trademark should not be registered in which the Registrar of Trademarks takes time and listens to both sides before making the final decision on the matter. If the opposition is upheld, the application is refused; if not, the trademark moves to the next stage of registration.

• **Registration Section**: After a trademark is in the public domain and nobody contests it through the opposition period, it is advisable to be registered. The applicant is also supposed to pay the prescribed fee for registration. Upon payment, the applicant is issued a registration certificate that is initially valid for ten years. The Registrar considers the application withdrawn unless the fee is paid within the time allowed for the fee payment.

The Trade Marks Ordinance 2001 lays down the law for registration and protection of trademarks in Pakistan. As we shall see through the various sections of the Trade Mark Ordinance of Macao, the above-stated Olympia trademark law provides for a register through various sections of the Trade Marks Registry to enhance the functionality of the registration system, making it clear, simple, and internationally protective of both ordinary and well-known trademarks.

3.4. Trademark Registration and Post-Registration Processes in Pakistan

In Pakistan, the legal legislation responsible for the registration as well as administration of trademarks is the Trade Marks Ordinance of 2001. This prevents trademarks from being infringed and means that several sections within the framework properly handle their registration.

3.5. Post-Registration Section

The Post-Registration Section, therefore, handles any alteration in a trademark after it has been registered. Such transactions include change of address, ownership change, amendment and other related activities. This section also ensures that all the changes are captured and that they are legally binding.

3.6. Renewal Section

Trademark registration in Pakistan is initially provided for a period of 10 years. The Renewal Section is in charge of performing renewals for trademarks for the subsequent ten-year terms. This section deals with informing the owners of trademarks about the renewal and processing of the relevant TM-12 form and payment documentation. In case of renewal, a renewal certificate is provided, and the trademark protection lasts for another ten years.

3.7. Record Section and Legal Section

The Record Section provides all official records of registered trademarks and keeps all information updated and at hand. Any issues that arise concerning the subject of trademarks, such as legal advice, dispute resolution, and adherence to trademark legislation, fall under the purview of the Legal Section.

3.8. Administration/HR/Accounts Section

This section is responsible for coordinating the internal functioning of the Trade Marks Registry, which includes personnel, finance, and general services. It ensures that operations of the office run smoothly and offers the support needed to the sections.

3.9. IT Section

IT section of the Trade Marks Registry is under the mandate of managing the technological framework of the Registry. This includes automation, its support, and making sure that the registry's information technology is secure and optimized.

3.10. Design Registration and Protection

Industrial design and model registration is a legal process protected in Pakistan under the law. An application for design registration is tested for compliance with certain standards like novelty and distinctiveness, among others. When filed, the design is protected for an initial term of ten years counted from the filing date or priority date where applicable. This protection can be renewed for other two terms of ten years each. Renewal applications should be filed within the last six months of the tenth year of protection. Still, late renewal is allowed up to six months after the protection period without penalty.

In the publication of registration, assignment, or cancellation of a design, it is announced in the Official Gazette to achieve transparency and to inform the public. (Abu-Ghazeleh, 2017) These entries are also noted in the official register and serve the legal purposes of proving the status and ownership of the design in Pakistan. (National Fertilizers Ltd. versus ICI Pakistan Ltd, 2005)

3.11. Design Registration Process in Pakistan

In Pakistan, the person desirous of the registration of a new or original design can apply for registration of the same if the design has yet to be published elsewhere in the world except as defined in sect 11 of the Ordinance. There is no requirement that the applicant has to be the person who created the design in order to be able to register it. According to Section 2(b) of the Ordinance, the term "proprietor or creator of a design" includes any person or entity, such as a company or partnership, (The Patent Office, 2000) for whom the design is created for consideration.

3.12. Designs Not Eligible for Registration

Certain designs are not eligible for registration under the Ordinance. Specifically, the following categories are not registrable:

- Designs that the Registrar of Designs deems to lack originality or uniqueness.
- Designs that reproduce or imitate armorial bearings, emblems, seals, coats of arms, insignia, orders of chivalry, decorations, or flags belonging to any country, city, borough, town, society, corporate body, institution, or individual, without the appropriate consent from the relevant authority or person.
- The Pakistan Names and Emblems (Prevention of Unauthorized Use) Act, 1957, further restricts the registration of certain names, emblems, and their reproductions or imitations as designs under the Registered Designs Ordinance, 2000, and the Patents Ordinance, 2000. (Law, 2000)

3.13. Requirements for Registration

To register a design, an application must be submitted on the prescribed form, including multiple representations of the design or a specimen of the article bearing the design. The prescribed fee and an affidavit in accordance with Rule 63B must accompany the application. If the same design is to be registered in more than one class, separate applications must be filed for each class. (Experts)

3.14. Non-Completion of Registration

If the applicant is negligent or in default in failing to complete their application, the application remains inactive for six months since the initial application's date, it will be considered abandoned. (Abu-Ghazeleh,2017) This, in essence, means that the applicant loses this chance of gaining registration of that design unless they apply again and go through the appropriate channels.

The legal system of Pakistan facilitates a rather smoothly coordinated process of the registration of new and original designs and, at the same time, indicates what cannot be protected under the law of registration. It is critical to understand the application process and adhere to all the mentioned requirements in order to register a design and obtain legal protection adequately.

3.15. Layout Design of Integrated Circuits

An integrated circuit or IC is a product that can be a final product or an intermediate product, a combination of units, at least one of which is an active unit. These elements, together with their mutual connections, are built on or in a piece of materials, and the whole construction should accomplish certain electronic functions. The layout design or topography of an IC may refer to the location and interconnection of these elements as well as the three-dimensional mapping of the features within the integrated circuit. (Revenue) This layout is important because it defines how the circuit will operate and how efficiently it will be able to execute the required electronic duties. It is simply the layout map that the IC has, which gives it details on the location of the various components in order to deliver the best performance.

3.16. Domain Name Management in Pakistan

PKNIC is the national domain name registry for the country it is exclusively mandated with the task of regulating the domain '. Undefined It is a registry that is responsible for the administration and registration of domain names under this ccTLD. PKNIC possesses the right to cancel or transfer a domain name in the event that the registration was done in a manner that violates PKNIC's Registration Policy or the terms provided in the Domain Name Registration Form. (Villani, 2017)

Regarding the Use and Dispute of Domain Name, PKNIC policy requires that any conflict as to who has the right to the specific name should be handled through legal means or PKNIC's dispute resolution mechanisms. Using a similar domain can cause potential confusion for customers of the company. (Sui Northern Gas Ltd. versus M/S Alpha Solutions, 2017)

3.17. Domain Name Registration Process

While applying for a domain name with PKNIC, an applicant is not required to possess a registered trademark in Pakistan. However, in case of any dispute concerning two applications for the same domain name or for any party who seeks a domain name that is already registered under a trade name or trademark infringement, then the lack of trademark registration may emerge. (Vellani, 2017)

Contrary to this, PKNIC does not mandate the applicant of the domain name to have an official address or administrative contact located in Pakistan. This flexibility allows for broader accessibility in registering domain names under the .pk ccTLD. Also, the domain name does not necessarily have to mirror the company's name or its trademarks. This, in turn, means that you are allowed to register business names as URLs, common names, and even simple English words if you so wish. However, the domain space is controlled and regulated by the PKNIC, which does not allow proper names or words that are deemed abusive or obscene in domain names (Vellani, 2017). It gives guidelines on the process of registering domain names to promote easy sharing of domain names. Still, it has measures in place to address different issues that may arise from disputes and misuse of domains. This guarantees that there is a balance of domain name control within the country.

3.18. Dispute Resolution in Domain Names

The Internet Corporation for Assigned Names and Numbers, or ICANN, set the Uniform Domain Name Dispute Resolution Policy or UDRP, along with its corresponding rules, on October 24, 1999, to cater to disputes about domain names. This policy establishes how disputes concerning domain name registrations, in situations where trademark owners feel that their rights have been violated, will be settled. PKNIC is an organization that manages some of the domain name systems for Pakistan. Some of these countries, including the .pk domain, have adopted the UDRP with certain amendments to meet local preferences. PKNIC has also engaged the services of a local support organization to address any dispute arising out of domain name registrations or use to ensure that the process of dispute resolution is well applicable and effective within the national environment.

In Pakistan, presently, 19 second-level domain extensions are available for different uses. For instance, the code ". com.pk" is commonly used by persons or companies; ".net.pk" is for networking companies, and ". edu.pk" is for educational organizations. Others are: "org. pk" for use by non-profit organizations, "gov. pk" for organizations under the government, and "biz. pk" for general business and advertising. (Vellani, 2017)These domain categories assist in creating order in the digital environment in Pakistan and guarantee that the domain names are congruent with the nature of the registered companies.

3.19. Geographical Indications (GI) in Pakistan

Geographical indications (GIs) are the type of intellectual property rights whereby products are referred to specific areas, regions, or countries where the quality, reputation, or other characteristics of products are substantially associated with the geographical origin of the product. In Pakistan, the GIs are protected under the Trade Mark Ordinance of 2001 through sections such as Section 2(xix), Section 82, and Section 83. (Ali, 2011) The ordinance further explains that GIs can be protected under the trademark act in Kenya through registration of the marks as collective or certification marks. (Ali, 2011)

Some of the well-known Pakistani GIs are Basmati rice, sports goods manufactured in Sialkot, oranges produced in Sargodha, known as Kinnow oranges, and mangoes of Multan. They encompass the natural conditions of the respective regions and have been associated with specific features that have taken years to develop.

3.20. Protection Mechanism for GIs

It is noteworthy that although there is the existence of the Trade Marks Ordinance to support the protection of GIs, attempts have been made recently towards the formulation of a separate Geographical Indications Protection Law in Pakistan. As previously noted, this law is still in the draft format, has been formulated following consultation with relevant stakeholders, and complies with contemporary best practices across the globe. The draft has been presented to the Ministry of Commerce to endorse and put into practice, which is expected to present a more vigorous and precise apparatus for safeguarding GIs in Pakistan. (Abu-Ghazeleh, 2017)

3.21. Genetic Resources, Traditional Knowledge, and Folklore (GRTKF)

Genetic resources refer to the genetic material of plants, animals, or microorganisms that have potential use in the future. TK and Folklore are essential components of many societies that include numerous activities, knowledge, beliefs, and creative achievements acquired and transmitted across generations. It extends to other fields such as farming practices, health and medical practices, music, folklore, proverbs, history, and traditions.

In Pakistan, IPO-Pakistan stands for Intellectual Property Organization of Pakistan, which is a key organization working to establish a database for GRTKF and to formulate legal measures for the preservation and advancement of these resources. It aims to protect the rights of indigenous and local communities' knowledge and assets from being used without their consent, including replication, misappropriation, or exploitation through commercialization. It also seeks to strike a proportionate and reasonable measure to safeguard the indigenous practices while affording room for their expansion and exercise in the present society.

(Abu-Ghazeleh, 2017)

3.22. Plant Breeders' Rights in Pakistan

Plant or farmer's rights, plant breeders' rights (PBR), or plant variety rights (PVR) confer exclusive ownership of a new plant variety to the breeder for a limited period. These rights extend to the propagating material like seeds and cuttings as well as the harvested material like flowers and fruits. In Pakistan, these rights are governed under the Plant Breeders Act of 2016, (Pakistan, 2016) which is intended to safeguard the interests of plant breeders as well as promote innovation in plant varieties.

4. Conclusion

There is a dire need for the reformation of the judicial approach to arbitration in Pakistan. At present, the legal culture of Pakistan restricts itself from being defensive and interventionist in matters related to arbitration instead of being supportive and supervisory. This attitude brings about issues that frustrate the arbitration process as well as the general economy. At a time when policymakers are striving to encourage the flow of foreign direct investment, such an approach only fuels hostility and apprehension amongst the investors.

To overcome these challenges, first of all, the academic, legal, and judicial communities need to change the perception of arbitration more positively. If international arbitration is seen as independent from and advantageous to these parties, it may promote investment climate improvement. Moreover, due to its passage, Pakistan needs to harmonize its IP legislation with the trade-related international agreements and standards to meet them and, as a result, establish confidence in its domestic and international legal system. It is, therefore, imperative to align to these standards in order to better protect intellectual property rights as well as help foster a better economy.

References

1911, C. A. (n.d.). Copyright Act 1911. Retrieved from https://www.legislation.gov.uk/ukpga/Geo5/1-2/46/enacted

- 1962, C. O. (2023, 9 22). Copyright Ordinance 1962. Retrieved from https://www.fia.gov.pk/files/act/27.pdf
- 1967, C. R. (n.d.). Copyright Rules 1967. Retrieved 8 18, 2023, from https://wipolex-res.wipo.int/edocs/lexdocs/laws/en/pk/pk013en.html
- 2000, P. O. (2000, 9 7). Patents Ordinance 2000. Karachi, Sindh, Pakistan. Retrieved 11 25, 2023, from https://ipo.gov.pk/system/files/%28112%29PatentsOrdinance2000_Amendmentsfinal_0.pdf
- Abu-Ghazeleh. (2017). *Abu-Ghazeleh Intellectual Property. 'Handbook 2017'*. Retrieved from www.agip.com: http://www.agip.com/Agip_Country_Mainpage.aspx?country_key=284&lang=en>

Ali, H. (2011). The Protection of Geographical Indications in Pakistan. The Journal of Intellectual Proerty Rights, 467.

- Anwar, H. A. (2022, 12 30). Critical Analysis of Patent Laws in Pakistan Since Independance. *Qlantic Journal of Social Sciences*, 3(2), 24-31. doi:https://doi.org/10.55737/qjss.194663773
- Associates, A. (n.d.). Patent Law in Pakistan. Retrieved 3 22, 2018, from https://www.aswal.com/patent-law-in-pakistan.php#:~:text=Under%20the%20Patents%20Ordinance%2C%202000,from%20the%20accorded%20filing%20date.
- Associates, K. K. (n.d.). *Khursheed Khan & Associates*. Retrieved 9 22, 2023, from https://pakistanlaw.com/copysoft.htm#:~:text=Section%206(1)%20provides%20that,to%20be%20published%20simultaneo usly%20in

Bata Pakistan Limited versus M/S Shoe Company, PLD 2010 Karachi 165 (Karachi High Court 2010).

- Candidate. (2016). Practical Implication of Intellectual Property Law in Developing States as Pakistan and role of International Arbitration Law in Disputed Cases. *Matser Thesis 'Practical Implication of Intellectual Property Law in Developing States as Pakistan and role of International Arbitration Law in Disputed Cases'*. Oslo: University of Oslo.
- Experts, G. L. (n.d.). Pakistan New Rules for Design Registrations. Retrieved 9 29, 2023, from https://globallawexperts.com/pakistan-new-rules-for-design-registrations/

Law, J. a. (2000, 97). Registered Disigns Ordinance 2000. *Registered Disigns Ordinance 2000*. Karachi, Sindh, Pakistan. Retrieved 98, 2023, from https://wipolex-res.wipo.int/edocs/lexdocs/laws/en/pk/pk003en.pdf

- Mansoor, K. (2005, 12). Intellectual Property Law and Globalization. Retrieved from Supreemcourt.gov.pk: http://supremecourt.gov.pk/ijc/Articles/19/2.pdf>
- Mansoor, K. (n.d.). *Intellectual Property Law and Globalization*. Retrieved 8 18, 2023, from http://supremecourt.gov.pk/ijc/Articles/19/2.pdf
- *Mumtaz & Associates.* (n.d.). (Mumtaz & Associates) Retrieved 12 18, 2023, from Mumtaz & Associates: https://www.ma-law.org.pk/summary_patents#:~:text=Effective%20January%201%2C%202005%2C%20Pakistan,UNIFORM%20filing%2 0is%20now%20restored.

National Fertilizers Ltd. versus ICI Pakistan Ldt., PLD 2005 Lahore 123 (Lahore High Court 2005).

Nations, U. (1970, 2 28). United Nations Treaty Collection. Retrieved 8 20, 2023, from https://treaties.un.org/pages/showdetails.aspx?objid=0800000280115ec9

- Organization, W. T. (n.d.). Overview: the TRIPS Agreement. *TRIPS : A MORE DETAILED OVERVIEW OF THE TRIPS AGREEMENT*. Retrieved 8 20, 2023, from https://www.wto.org/english/tratop_e/trips_e/intel2_e.htm#:~:text=Overview%3A%20the%20TRIPS%20Agreement,multil ateral%20agreement%20on%20intellectual%20property.
- Pakistan, T. G. (2016). Plant Breeders' Rights Act, 2016. FAOLEX Database. Pakistan: Nations, Food and Agriculture Organization of the United. Retrieved 10 15, 2023, from https://faolex.fao.org/docs/pdf/pak164580.pdf
- PayPro. (2021, 10 29). Copyrights and its Registration Process. Copyrights and its Registration Process. Retrieved 6 14, 2023, from https://help.paypro.com.pk/article/15
- Revenue, F. B. (n.d.). INTERNATIONAL LAWS ON IPR. *IPR Law/Rules*. Retrieved 6 15, 2023, from https://fbr.gov.pk/directorate-general-ipre-law-rules/174003
- Sharif, K. (2008). Intellectual Property Law in Pakistan. Retrieved from Allatiflaw.wordpress.com: https://allatiflaw.wordpress.com/2008/06/09/intellectual-property-law-in-pakistan-2/
- Shell Pakistan versus ExxonMobil Chemical Pakistan Limited (Supreme Court of Pakistan 2015).
- Sui Northern Gas Ltd. versus M/S Alpha Solutions, PLD 2017 Lahore 456 (Lahore High Court 2017).
- The Patent Office, K. (2000, 9 7). Registered Designs Ordinanace, 2000. Karachi, Sindh, Pakistan. Retrieved 9 8, 2023, from https://wipolex-res.wipo.int/edocs/lexdocs/laws/en/pk/pk003en.pdf
- Vellani, V. a. (2017). Internet Domain Names. Retrieved from Vellani.com: < http://www.vellani.com/domain.html>
- Warid Telecom Ltd. versus Telenor Pakistan Ltd. (Islamabad High Court 2007).
- WIPO. (1886, 9 9). Berne Convention for the Protection of Literary and Artistic Works. Berne Convention for the Protection of Literary and Artistic Works. Berne, Switzerland. Retrieved 8 20, 2023, from https://www.wipo.int/treaties/en/ip/berne/#:~:text=The%20Berne%20Convention%2C%20adopted%20in,whom%2C%20a nd%20on%20what%20terms.
- WIPO. (1952, 9 6). Universal Copyright Convention of 1952. United Nations Treaty Series. Retrieved 8 20, 2023, from https://wipolex-res.wipo.int/edocs/lexdocs/treaties/en/unesco1/trt_unesco1.pdf
- WIPO. (n.d.). Summary of the Berne Convention for the Protection of Literary and Artistic Works (1886). Retrieved 8 20, 2023, from https://www.wipo.int/treaties/en/ip/berne/summary_berne.html
- WIPO. (n.d.). The Copyright (Procedure) Regulations, 1981. Retrieved 8 18, 2023, from https://wipolexres.wipo.int/edocs/lexdocs/laws/en/pk/pk013en.html
- WIPO. (n.d.). The International Copyright Order 1968. Retrieved 8 18, 2023, from https://wipolexres.wipo.int/edocs/lexdocs/laws/en/pk/pk013en.html