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COMPREHENSIVE ANALYSIS OF PATENTEE RIGHTS, OBLIGATIONS, AND PATENT MECHANISMS IN INTELLECTUAL PROPERTY LAW

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Abstract

Patents are a cornerstone of intellectual property (IP) law, designed to stimulate innovation by granting inventors exclusive rights over their creations for a limited period. The balance between encouraging innovation and protecting public interest is integral to the patent system. This paper provides a comprehensive exploration of patentee rights, obligations, and patent mechanisms, with an emphasis on legal provisions, international treaties, and judicial interpretations. It discusses the exclusive rights conferred by patents, including the right to exclude others from making, using, or selling the invention. Alongside these rights, patentees are subject to several obligations, such as the disclosure of the invention, payment of maintenance fees, and the requirement to commercially exploit their patents. These obligations ensure that the benefits of patented inventions are shared with society at large.

The paper also examines key legal mechanisms for enforcing patents, including infringement litigation, injunctions, and compulsory licensing. With the rise of complex technologies such as biotechnology and artificial intelligence (AI), new challenges have emerged in determining patentability and enforcing patent rights. The role of international treaties like the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement, the Paris Convention, and the Patent Cooperation Treaty (PCT) in harmonizing patent laws across jurisdictions is analyzed in detail. The paper incorporates a critical analysis of landmark cases such as *Novartis AG v. Union of India* (2013), which addressed the issue of "evergreening" patents, and *Natco Pharma Ltd. v. Bayer Corporation* (2014), a pivotal case involving compulsory licensing in the pharmaceutical industry.

In addition to examining substantive legal doctrines, this paper addresses the emerging concerns regarding patent thickets, the evergreening of patents, and the role of patent systems in balancing proprietary rights with public access to essential innovations, particularly in healthcare and technology sectors. Through this comprehensive analysis, the paper aims to provide insights into how patent systems can continue to incentivize innovation while ensuring equitable access to technological advances.

Introduction

Patents are an essential feature of intellectual property law, serving as a mechanism to encourage technological advancements by granting inventors exclusive rights over their innovations for a specified duration. These rights allow inventors to reap the benefits of their creativity, while the public gains access to detailed disclosures of new technologies, contributing to further innovation. The underlying philosophy of patent law rests on a delicate balance: providing sufficient incentives for inventors to innovate while ensuring that the public can eventually benefit from the patented technology once the exclusive rights expire. This balance is at the heart of every patent system,

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and it is the reason patents are structured with both rights and obligations for the patentee.

Patentee rights and obligations are codified through various national legislations and international treaties. The *Indian Patents Act, 1970*[1484], for instance, is a robust legislative framework that mirrors many of the principles enshrined in global treaties such as the *TRIPS Agreement*. Article 27 of the *TRIPS Agreement*[1485] sets out the basic patentability criteria, requiring that inventions be novel, involve an inventive step, and be capable of industrial application. These criteria are common to most patent systems, including the European and U.S. patent regimes. This framework not only defines the scope of patent protection but also ensures uniformity in patent law across member nations of the World Trade Organization (WTO).

Historically, the patent system has evolved alongside technological and industrial developments. The roots of patent law trace back to the 15th century in Venice, which introduced the first formalized patent system designed to protect inventors' rights over their creations. The English Statute of Monopolies of 1624 further codified these rights by limiting the sovereign's power to grant monopolies, thereby laying the groundwork for modern patent law. Today, patent systems around the world have evolved to cater to the increasingly complex technological landscape, including sectors such as pharmaceuticals, biotechnology, and information technology.

The rights conferred by a patent, typically lasting 20 years from the filing date as per Article 33 of the *TRIPS Agreement* and Section 53 of the *Indian Patents Act, 1970*, include the exclusive right to prevent others from making, using, selling, or importing the patented invention without the patentee's consent. These rights enable inventors to control the commercial exploitation of their inventions, providing a competitive advantage in the market. For example, in *F. Hoffmann-La Roche Ltd. v. Cipla Ltd.*, 148 (2008) DLT 598 (Del.), the court granted an injunction preventing the sale of a generic version of a patented drug, affirming the patentee's exclusive rights.

However, with rights come obligations. Patentees must fully disclose their inventions to the public, ensuring that once the patent expires, the invention can be freely used by anyone. This obligation is crucial because it contributes to the body of knowledge and encourages further innovation. Section 10 of the *Indian Patents Act* mandates that the patentee must submit a complete specification, including detailed claims and a description of the invention. This concept of full disclosure is central to the patent bargain, as it ensures that society gains from the knowledge embedded in the patented invention.

Additionally, patentees are obligated to "work" their patents, meaning they must ensure that the patented invention is being used or commercialized within the jurisdiction. Failure to do so can result in the issuance of a compulsory license, as illustrated in the landmark case *Natco Pharma Ltd. v. Bayer Corporation*, where Bayer's cancer drug was found to be inaccessible and unaffordable to the public, leading to the grant of a compulsory license to Natco under Section 84 of the *Indian Patents Act*.

The enforcement of patent rights also plays a critical role in maintaining the integrity of the patent system. Patentees are empowered to take legal action against infringers, with remedies ranging from injunctive relief to damages and the seizure of infringing goods. The *Indian Patents Act*, under Section 108, provides for such remedies, and courts have consistently upheld the rights of patentees in cases of infringement. In *Ericsson v. Micromax*, (2015) 225 DLT 251 (India), the court granted damages and an injunction to Ericsson, highlighting the role of judicial enforcement in protecting patented technologies.

[1484] The Patents Act, 1970, No. 39, Acts of Parliament, 1970 (India).

[1485] Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299

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Internationally, patent mechanisms are governed by treaties that harmonize patent laws across jurisdictions. The *Patent Cooperation Treaty (PCT)*, administered by the World Intellectual Property Organization (WIPO), facilitates the filing of patents in multiple countries through a single international application, streamlining the process for inventors seeking global protection. Similarly, the *Paris Convention for the Protection of Industrial Property* (1883) established the priority system, allowing inventors to file for patent protection in different countries while retaining the same filing date, further promoting international uniformity in patent law.

As patent law has evolved, new challenges have emerged, particularly with regard to emerging technologies. The rise of artificial intelligence (AI) and biotechnology has raised complex questions about the scope of patentability and the definition of inventorship. Inventions generated by AI systems, for example, challenge traditional notions of human inventorship, and courts are grappling with how to address this issue. Additionally, the practice of "evergreening," where pharmaceutical companies seek to extend their monopoly by obtaining patents for minor modifications of existing drugs, has sparked debates about the limits of patent protection. The Indian Supreme Court addressed this issue in *Novartis AG v. Union of India*, (2013) 6 SCC 1, where it rejected Novartis' attempt to patent a modified version of an existing cancer drug, emphasizing the need to prevent unjustified extensions of patent monopolies.

This paper will critically examine these evolving dynamics, exploring the rights, obligations, and mechanisms that underpin the modern patent system. Through an analysis of statutory provisions, judicial precedents, and international treaties, this research aims to provide a nuanced understanding of how patent law strikes a balance between incentivizing innovation and ensuring access to essential technologies.

Chapter 1: Understanding Patent Law

Definition and Legal Basis of Patents

A patent is a statutory right conferred upon an inventor, providing exclusive rights to make, use, and sell an invention for a limited period, usually 20 years from the date of filing. This monopoly encourages innovation by allowing inventors to benefit commercially from their work. In exchange, the patentee must disclose the invention to the public, contributing to the body of knowledge that can be used once the patent expires.

In the international context, Article 27 of the TRIPS Agreement (Trade-Related Aspects of Intellectual Property Rights) defines patentable inventions as those that are novel, involve an inventive step (non-obviousness), and are capable of industrial application (usefulness). TRIPS, along with national legislations, provides the legal foundation for modern patent systems.

Historical Development of Patent Law

The evolution of patent law is a fascinating journey through history, reflecting humanity's efforts to protect and incentivize creativity. The first formalized patent system emerged in Venice during the 15th century, offering inventors exclusive rights in exchange for public disclosure of their inventions. This innovative approach not only encouraged technological advancements but also set the stage for intellectual property laws worldwide.

The English Statute of Monopolies of 1624 marked a significant milestone, restricting the Crown's power to grant arbitrary monopolies and laying down the foundational principles of modern patent law. By emphasizing that patents should only be granted for genuine innovations, the Statute established a legal framework that prioritized fairness and economic growth.

During the Industrial Revolution, patent systems evolved to address the complexities of a rapidly industrializing world. The Paris Convention of

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1883[1486] introduced the concept of national treatment, ensuring that foreign inventors received the same rights as domestic ones. This treaty also established the principle of priority, allowing inventors to claim an earlier filing date in multiple jurisdictions.

The 20th century witnessed further harmonization with the introduction of the Patent Cooperation Treaty (PCT)[1487] in 1970, which streamlined the process of filing patents across multiple countries. This period also saw the rise of specialized patent laws to address technological advancements in fields such as pharmaceuticals and electronics. For instance, the Hatch-Waxman Act in the United States balanced patent protection with the need for affordable generic drugs.

In recent decades, patent law has continued to evolve to meet the challenges of the digital age. Issues such as software patents, biotechnological innovations, and artificial intelligence have prompted legislators and courts to rethink traditional definitions of inventorship and patentability. The advent of international agreements like the TRIPS Agreement under the World Trade Organization has further standardized patent norms, ensuring consistency across member nations while accommodating local economic and social needs. This rich history underscores the adaptability and resilience of patent law, which continues to evolve in response to societal and technological transformations.

Modern patent systems trace their roots to Venice's 15th-century statutes and the English Statute of Monopolies (1624). International agreements, such as the Paris Convention and the Patent Cooperation Treaty (PCT), have since streamlined processes and standardized rights across jurisdictions. These historical developments underscore the adaptability of patent laws in addressing societal and technological shifts. For instance, the Paris Convention's priority system ensures that inventors can secure rights globally without losing their initial filing date, fostering international innovation collaboration.

Chapter 2: Rights of a Patentee

Exclusive Rights of Patentees

Once granted, a patent provides the patentee with several exclusive rights, as codified in most national laws and international agreements:

i) Right to Exclude: The patentee can prevent third parties from making, using, selling, or importing the patented invention without authorization. This right is enshrined in most national patent laws, such as Section 48 of the Indian Patents Act, 1970, and Article 28 of the TRIPS Agreement.

ii) Right to License: The patentee can grant licenses to third parties, either exclusively or non-exclusively, allowing them to commercially exploit the invention. Licensing plays a vital role in industries like pharmaceuticals and biotechnology, where collaborative development is common.

iii) Right to Transfer or Assign: Patentees have the right to assign or transfer their patent rights to another entity. The Indian Patents Act, 1970 explicitly recognizes assignment rights under Section 68, requiring assignments to be in writing and registered with the patent office.

Right to Seek Injunctive Relief

In cases of infringement, patentees can seek remedies in the form of injunctions. An injunction can be either temporary or permanent, aimed at preventing further infringement. The TRIPS Agreement, under Article 44, mandates that judicial authorities have the power to order injunctions to prevent patent violations.

[1486] Paris Convention for the Protection of Industrial Property, Mar. 20, 1883, 828 U.N.T.S. 305.
[1487] Patent Cooperation Treaty, June 19, 1970, 1160 U.N.T.S. 231.

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A key case that illustrates the importance of injunctive relief is F. Hoffmann-La Roche Ltd. vs Cipla Ltd. (2008)[1488], where the Delhi High Court granted a temporary injunction to Roche, preventing Cipla from selling a generic version of a patented drug. The case highlighted the conflict between protecting patent rights and ensuring access to affordable medicines in India.

Duration and Renewal of Patentee Rights

As per Article 33 of the TRIPS Agreement and Section 53 of the Indian Patents Act, the standard duration of a patent is 20 years from the filing date. To maintain the patent, patentees must pay periodic renewal fees. Failure to pay these fees results in the lapse of patent rights, as demonstrated in the Indian Supreme Court case Dr. (Mrs.) Suman Dhamija v. Union of India[1489], where the court upheld the lapse of a patent due to non-payment of renewal fees.

Right to Enforce Patent through Litigation

The patentee's right to enforce the patent through litigation is vital for protecting their exclusive rights. Patent enforcement mechanisms are available through national courts and can involve claims for damages, injunctions, and account of profits. The Indian Patents Act (Section 108) provides that the patentee can recover damages for infringement, while courts can also grant an injunction to prevent future violations.

Chapter 3: Obligations of a Patentee

Disclosure Obligation

The requirement to disclose the invention is a key obligation under patent law. The invention must be disclosed in a manner that enables a person skilled in the relevant field to replicate it. This obligation is codified in Section 10 of the Indian Patents Act, 1970, which requires the submission of a complete specification, including claims and a detailed description of the invention.

In the case Bayer Corporation v. Union of India (2014)[1490], the issue of adequate disclosure was raised when Bayer sought to prevent a compulsory license for its cancer drug. The court emphasized that public interest in disclosure and access to the patented drug was paramount, and Bayer's failure to ensure the drug's accessibility led to the issuance of a compulsory license.

Obligation to Pay Maintenance Fees

Patentees must pay maintenance or renewal fees to keep the patent in force. Section 53(2) of the Indian Patents Act specifies that patents must be renewed annually from the third year onward. Non-payment results in the automatic lapse of the patent. This provision ensures that only commercially valuable patents remain protected, thereby reducing patent clutter.

Working of Patents (Commercial Exploitation)

Many national laws require the patentee to commercially exploit or "work" the patented invention within the jurisdiction. Section 83 of the Indian Patents Act, 1970 emphasizes the need to promote technological innovation and ensure that the invention is available to the public at reasonably affordable prices. Failure to work a patent can result in the issuance of compulsory licenses under Section 84, as seen in the Natco Pharma Ltd. v. Bayer Corporation case[1491], where Bayer's failure to make its cancer drug reasonably available led to the grant of a compulsory license to Natco Pharma.

Obligation to Address Third-Party Patent Challenges

In many jurisdictions, patentees are required to address third-party challenges to their patents. Patent offices and courts allow for mechanisms such as post-grant opposition and revocation of patents. Under Section 25 of the Indian

[1488] *F. Hoffmann-La Roche Ltd. v. Cipla Ltd.*, 148 (2008) DLT 598 (Delhi).
[1489] Dr. (Mrs.) Suman Dhamija v. Union of India, (2004) 2 SCC 90 (India).
[1490] Bayer Corporation v. Union of India, 2014 SCC OnLine Bom 43 (India).
[1491] Natco Pharma Ltd. v. Bayer Corporation, 2014 SCC OnLine IPAB 71 (India).

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Patents Act, any interested party can file a post-grant opposition within one year of the patent being granted. This provision ensures that invalid patents can be challenged by competitors or public interest groups.

Chapter 4: Patent Mechanisms and Procedures

Patent Application and Examination Process

The patent application process is governed by specific legal procedures, which vary by jurisdiction but follow a general framework:

i. Filing a Patent Application: An inventor must file a patent application with the relevant patent office. The application must include a specification outlining the invention, claims defining the scope of protection, and necessary drawings. Section 7 of the Indian Patents Act outlines the filing requirements.
ii. Examination and Grant: After filing, the application undergoes a formal examination to determine whether the invention meets the patentability criteria of novelty, inventive step, and industrial applicability. Article 29 of the TRIPS Agreement mandates that patent applications be examined promptly, and patents should be granted or refused based on these criteria[1492].
iii. Opposition Proceedings: Many jurisdictions, including India, provide for opposition proceedings where third parties can challenge the patent either before or after grant. The Indian Patents Act allows for both pre-grant opposition (Section 25(1)) and post-grant opposition (Section 25(2)).

International Patent Systems

To simplify patent protection across multiple jurisdictions, various international systems have been developed:

i) Paris Convention (1883): Allows patent applicants to claim priority for their invention in other member countries within 12 months of the first filing. This helps patentees secure rights in multiple jurisdictions while ensuring consistency in filing dates.
ii) Patent Cooperation Treaty (PCT): The PCT system allows inventors to file a single international application, which can then be used to seek protection in multiple countries. The PCT simplifies the process by deferring the national filing requirements until a later stage. PCT applications are governed by the World Intellectual Property Organization (WIPO).[1493]

Chapter 5: Patent Infringement and Enforcement

Infringement of Patent Rights

Patent infringement occurs when an unauthorized party uses, manufactures, sells, or imports a patented invention without the patentee's consent. Patent infringement is defined under Section 48 of the Indian Patents Act. The patentee must prove that the infringing product or process falls within the scope of the patent claims.

Types of Infringement: Infringement can be direct or indirect. Direct infringement involves unauthorized acts like manufacturing or selling the patented invention. Indirect infringement occurs when a party contributes to or induces infringement, such as by providing the means for another party to infringe the patent.

Legal Remedies for Infringement

Patentees can seek several remedies in cases of infringement, including:

i. Injunctions: Injunctions are the primary remedy in patent infringement cases. They can be temporary or permanent, depending on the severity of the infringement. In

[1492] U.S. Patent and Trademark Office, Manual of Patent Examining Procedure, https://www.uspto.gov/web/offices/pac/mpep/mpep.htm.

[1493] WIPO, World Intellectual Property Indicators 2022, https://www.wipo.int/publications/en/details.jsp?id=4526

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Ericsson v. Micromax (2013)[1494], the Delhi High Court granted an injunction to Ericsson, preventing Micromax from selling infringing smartphones.

ii. Damages or Account of Profits: Courts can award damages to compensate for losses incurred due to infringement. Alternatively, the court can order the infringer to account for and surrender the profits made from the unauthorized use of the patented invention.

iii. Seizure and Destruction: In some cases, the court may order the seizure and destruction of infringing goods, as provided under Section 108 of the Indian Patents Act.

Defences to Patent Infringement

Defendants in patent infringement cases can raise several defenses, including:

i. Invalidity of the Patent: The defendant can argue that the patent should not have been granted due to lack of novelty, inventive step, or industrial applicability. The burden of proof lies with the defendant to establish that the patent is invalid.

ii. Non-Infringement: The defendant may argue that their product or process does not fall within the scope of the patent claims. This is typically established through expert testimony and technical analysis.

iii. Exhaustion of Rights: The principle of exhaustion, or the first-sale doctrine, provides that once a patented product is sold with the patentee's consent, the patentee's rights are exhausted, and the purchaser is free to use or resell the product.

Chapter 6: Emerging Issues and Challenges in Patent Law

Patent Thickets and Innovation Barriers

The term "patent thicket" refers to the situation where numerous overlapping patents create a dense web of legal claims that can stifle innovation. This is especially common in industries like telecommunications, where multiple entities may hold patents on various components of a technology. Patent thickets can deter new entrants into the market and slow down technological advancements.

Evergreening of Patents

Evergreening refers to the practice of obtaining multiple patents for incremental improvements to an existing invention, thereby extending the monopoly beyond the original patent term. Many jurisdictions have enacted laws to prevent evergreening. In India, Section 3(d) of the Indian Patents Act prohibits patents for new forms of known substances unless they show significantly enhanced efficacy. This provision was upheld by the Indian Supreme Court in the landmark case Novartis AG v. Union of India (2013)[1495], where the court denied a patent for a modified version of an existing cancer drug, citing evergreening concerns.

Compulsory Licensing and Access to Essential Medicines

Compulsory licensing allows governments to authorize third parties to use a patented invention without the patentee's consent. This mechanism is particularly important in ensuring access to essential medicines. Article 31 of the TRIPS Agreement permits compulsory licensing in cases of public health emergencies.

India has actively used compulsory licensing provisions to promote access to affordable medicines. The Natco Pharma Ltd. v. Bayer Corporation case is a notable example where the Indian government granted a compulsory license for Bayer's cancer drug, Nexavar, on the

[1494] *Ericsson v. Micromax*, (2015) 225 DLT 251 (Delhi High Court)

[1495] *Novartis AG v. Union of India*, (2013) 6 SCC 1. Supreme Court of India

grounds that Bayer had failed to make the drug available at an affordable price.

Patents and Emerging Technologies

With the rise of emerging technologies such as artificial intelligence (AI), biotechnology, and blockchain, patent law faces new challenges. Determining patentability, especially for AI-generated inventions, raises questions about the definition of "inventor" under patent law. Several patent offices, including the European Patent Office (EPO)[1496] and the U.S. Patent and Trademark Office (USPTO), have rejected AI-generated patent applications, citing the need for a human inventor. However, the debate over the role of AI in patent law continues to evolve, with some jurisdictions considering reforms to address this issue.

Conclusion

The patent system remains a crucial component of modern intellectual property law, designed to foster innovation by granting inventors exclusive rights over their inventions for a limited time, in exchange for public disclosure. This delicate balance between encouraging innovation and ensuring that society ultimately benefits from technological advancements is central to the functioning of any patent regime. Patents incentivize inventors by providing them with a temporary monopoly, enabling them to commercialize their inventions and recoup their investments. However, this monopoly is not without limitations, as the law imposes several obligations on patentees to prevent abuse and ensure that the benefits of innovation are accessible to the public.

The obligation to disclose the invention ensures that the public can benefit from the knowledge embedded in the patent once the exclusive rights expire. Section 10 of the *Indian Patents Act* mandates the submission of a complete specification, which serves as the blueprint for future innovation. This principle of full disclosure is a cornerstone of patent law and is essential for maintaining the balance between private rights and public benefit. Furthermore, the requirement to "work" a patent, as provided under Section 83 of the *Indian Patents Act*, ensures that the patented invention is not merely held for speculative purposes but is made available to the public. Failure to work a patent can result in the grant of a compulsory license, as demonstrated in *Natco Pharma Ltd. v. Bayer Corporation*, (2014) SCC OnLine IPAB 71, where Bayer's failure to make a cancer drug accessible and affordable led to the issuance of a compulsory license to Natco.

The enforcement of patent rights through legal remedies is another critical aspect of the patent system. Section 108 of the *Indian Patents Act* provides patentees with the ability to seek injunctions, damages, and other forms of relief in cases of infringement. The decision in *Ericsson v. Micromax*, (2015) 225 DLT 251 (India), illustrates the importance of judicial enforcement in protecting patentees from unauthorized use of their inventions. By providing patentees with robust mechanisms to enforce their rights, patent law ensures that inventors can maintain their competitive edge in the market, thereby encouraging further innovation.

However, as technology advances, the patent system faces new challenges. Patent thickets, particularly in industries like telecommunications and biotechnology, create dense webs of overlapping patents that can stifle innovation rather than promote it. This issue is compounded by the practice of evergreening, where companies seek to extend their patent monopolies by making minor modifications to existing inventions. The Indian Supreme Court's ruling in *Novartis AG v. Union of India*, (2013) 6 SCC 1, which denied Novartis a patent for a modified cancer drug, highlights the judiciary's role in preventing the abuse of patent rights and ensuring that the public interest is not compromised by unwarranted extensions of patent monopolies.

[1496] European Patent Office, Guidelines for Examination in the EPO, https://www.epo.org/law-practice/legal-texts/guidelines.html.

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The rise of emerging technologies, such as artificial intelligence (AI) and biotechnology has further complicated the patent landscape. AI-generated inventions challenge traditional notions of inventorship, as seen in recent debates at the European Patent Office (EPO) and the U.S. Patent and Trademark Office (USPTO). While courts and patent offices have maintained that inventorship must be attributed to a natural person, the rapid development of AI technologies raises questions about how patent law will evolve to address these novel issues. Similarly, the biotechnology sector, particularly in relation to gene editing and synthetic biology, has raised ethical concerns about the extent to which living organisms can be patented. These issues will continue to shape the future of patent law, requiring legal frameworks to adapt to the complexities of modern innovation.

In conclusion, the patent system plays a pivotal role in promoting technological advancement by granting inventors exclusive rights over their innovations. However, these rights must be balanced with the obligations imposed on patentees to ensure that society benefits from the dissemination of knowledge and the commercial availability of new technologies. The legal mechanisms for enforcing patent rights, along with the safeguards against abuse, such as compulsory licensing and the prohibition on evergreening, help maintain this balance. As patent law continues to evolve in response to new challenges, particularly in the fields of AI and biotechnology, it will be crucial for legal frameworks to strike an equitable balance between encouraging innovation and safeguarding public interest.