

Intellectual Property Rights: A Systematic Literature Review in the Indian Context

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Abstract: This study presents a systematic literature review of Intellectual Property Rights (IPRs) in the Indian context, examining their evolution, legal framework, economic significance, and emerging challenges. The review highlights the influence of the TRIPS Agreement, domestic legislation, constitutional principles, technological development, and judicial interpretation on India's intellectual property regime. It covers major forms of intellectual property, including patents, copyrights, trademarks, geographical indications, and traditional knowledge, with particular attention to their role in promoting innovation, creativity, economic development, cultural preservation, and public welfare. The findings reveal a continuing need to balance exclusive rights with broader public interests, particularly regarding pharmaceutical patents, access to medicines, competition, and knowledge dissemination. The literature also identifies increasing challenges arising from digital technologies, artificial intelligence, online infringement, biotechnology, and technology-generated works. Furthermore, geographical indications and traditional knowledge demonstrate the importance of protecting community-based and culturally significant intellectual assets. Despite substantial legal and institutional development, gaps remain regarding enforcement effectiveness, accessibility, administrative efficiency, and empirical assessment of IPR outcomes. The review concludes that future research should adopt an integrated legal, economic, technological, and social perspective to evaluate the actual effectiveness of India's IPR framework and its contribution to innovation, entrepreneurship, sustainable economic development, and public welfare.

Keywords: Intellectual Property Rights (IPRs); Indian IPR Framework; Innovation; Patents; Copyright; Trademarks; Geographical Indications; Traditional Knowledge; Public Interest; Digital Technologies; IPR Enforcement; Sustainable Economic Development.

1.1 Introduction

Intellectual Property Rights (IPRs) have emerged as an important component of the contemporary legal, economic, technological and innovation framework. IPRs provide legal protection to creations of the human intellect and seek to balance the interests of creators and innovators with broader societal interests. In India, the development of the intellectual property regime has been significantly influenced by domestic legislation, constitutional principles, international obligations under the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), technological development and judicial interpretation. The Indian IPR framework encompasses patents, trademarks, copyrights, industrial designs, geographical indications, protection of plant varieties, semiconductor integrated-circuit layout designs and undisclosed information.

The literature on IPRs in India demonstrates a gradual transition from viewing intellectual property primarily as a mechanism for protecting individual proprietary interests towards understanding it as an instrument for innovation, economic development, cultural preservation, technology transfer and public welfare. Earlier scholarship particularly focused on India's transition to the TRIPS-compliant framework, whereas more recent literature examines innovation, digital technologies, traditional knowledge, geographical indications, access to medicines, enforcement and the effectiveness of India's institutional mechanisms.

1.2 Evolution Of Intellectual Property Rights In India

Tiwari et al. (2011) provide an extensive review of the development and management of IPRs in India. Their study discusses patents, copyrights, trademarks, industrial designs, geographical indications, trade secrets and other forms

of intellectual property. The authors highlight the significant influence of the WTO and TRIPS Agreement on the evolution of India's IPR framework. According to their analysis, India's transition towards stronger intellectual property protection was accompanied by concerns regarding the interests of developing countries, particularly in areas such as pharmaceuticals, public health and access to technology.

The literature therefore indicates that India's IPR regime cannot be examined independently of its international commitments. The post-TRIPS period required India to strengthen and modify its intellectual property legislation while simultaneously preserving policy space for public interest objectives. This dual responsibility continues to influence debates regarding patents, compulsory licensing, pharmaceutical innovation and access to essential goods.

1.3 Intellectual Property Rights And Innovation

Bhat's study on innovation and intellectual property rights law provides an important overview of the Indian legal framework governing innovation. The study observes that different dimensions of intellectual property are regulated through specific parliamentary legislation and that these laws operate within the broader constitutional framework. It examines patents, copyrights, trademarks, designs and remedies for infringement, while also highlighting the interaction between different intellectual property rights in practice.

This literature establishes that IPR protection can function as an incentive for research, creativity and technological innovation. At the same time, excessive or improperly designed protection may create barriers to competition, knowledge dissemination and access to socially important products. Consequently, the effectiveness of IPR policy depends not merely on granting exclusive rights but also on maintaining an appropriate balance between private incentives and public interests.

Recent developments demonstrate the growing importance of innovation within India's intellectual property ecosystem. The Office of the Controller General of Patents, Designs and Trade Marks reported that patent filings crossed the one-lakh mark for the first time during 2024–25, accompanied by significant growth in overall IP filings. This development indicates increasing participation in India's formal intellectual property system and reflects the growing importance of innovation and knowledge-based economic activity.

1.4 Patents And The Indian Pharmaceutical Sector

Patents constitute one of the most extensively studied dimensions of Indian intellectual property law. Existing literature has particularly focused on the relationship between patent protection, pharmaceutical innovation and public health. Tiwari et al. (2011) note that India's implementation of TRIPS substantially affected the pharmaceutical sector and the legal environment governing pharmaceutical inventions.

The literature on Indian patent law also emphasizes the tension between encouraging pharmaceutical research and ensuring affordable access to medicines. Bhat's analysis identifies important issues including the Supreme Court's decision in the Novartis case, Fair, Reasonable and Non-Discriminatory (FRAND) licensing and access to life-saving drugs.

Thus, scholarship suggests that the Indian patent regime reflects a public-interest-oriented approach. Patent protection provides incentives for investment and innovation, but patent rights are not absolute. Indian law incorporates mechanisms intended to prevent the abuse of exclusive rights and to protect wider social and economic interests.

1.5 Copyright Protection In India

Copyright represents another major area of Indian IPR scholarship. Indian copyright law protects original literary, dramatic, musical and artistic works as well as cinematographic works and sound recordings.

Software is also protected through the copyright framework. Tiwari et al. explain the scope of copyright protection in India and emphasize its importance in protecting creative and knowledge-based works.

The literature increasingly recognizes that copyright protection has become more complex because of digital technology. The expansion of digital media, online platforms, software, artificial intelligence and electronic

distribution has created new challenges concerning unauthorized reproduction, digital piracy, ownership and enforcement. Consequently, contemporary copyright scholarship increasingly focuses on whether traditional legal principles are sufficiently adaptable to rapidly changing technological environments.

1.6 Trademarks And Commercial Identity

Indian literature also identifies trademarks as an important instrument for protecting business identity, reputation and consumer confidence. Trademarks distinguish goods and services in the marketplace and enable businesses to develop valuable intangible assets. The broader literature on Indian IPR recognizes trademarks as one of the principal components of the country's intellectual property system.

The growing importance of brands, e-commerce and digital marketing has increased the economic significance of trademarks. At the same time, online infringement, counterfeit products, domain-name disputes and unauthorized commercial use of brands have created additional enforcement challenges. This indicates the need for effective administrative and judicial mechanisms capable of responding to both traditional and technology-enabled trademark infringement.

1.7 Geographical Indications And Protection Of Indian Heritage

Geographical Indications (GIs) have received increasing attention in Indian IPR literature because of their connection with local communities, cultural identity, traditional production systems and rural economic development. Tiwari et al. describe geographical indications as signs identifying goods whose qualities, reputation or characteristics are connected with a particular geographical origin.

Raza, Malik and Oriakhogba (2024) provide an empirical review of India's Geographical Indications of Goods (Registration and Protection) Act, 1999. Their study examined applications and registrations over two decades and reported that, out of 1,181 applications, 547 had been registered by January 2024.

The GI literature demonstrates that intellectual property can serve purposes beyond conventional commercial protection. GIs can contribute to the preservation of regional traditions, support local producers, enhance product reputation and potentially promote rural development. Nevertheless, registration alone does not guarantee economic benefits. Effective commercialization, awareness among producers, enforcement against misuse and equitable distribution of benefits remain important concerns.

1.8 Traditional Knowledge And Intellectual Property

Traditional knowledge has emerged as a distinctive area within Indian IPR scholarship. Yadav and Bohra examine the relationship between traditional knowledge and intellectual property and observe that the debate has expanded beyond patents to include trademarks, copyright and geographical indications. Their study highlights the conceptual differences between traditional knowledge systems and conventional intellectual property frameworks.

This literature is particularly relevant to India because of its extensive traditions of indigenous knowledge, medicinal practices, agricultural knowledge, handicrafts and cultural expressions. Conventional IPR systems are generally designed around identifiable creators and defined periods of protection, whereas traditional knowledge may be collectively developed, transmitted across generations and continuously modified. This creates difficulties in determining ownership, duration of protection and appropriate mechanisms for preventing unauthorized commercial exploitation.

Accordingly, scholars have emphasized the importance of developing mechanisms that can document and protect traditional knowledge without undermining community ownership or converting culturally significant knowledge into conventional private property.

1.9 Ipr And Public Interest

A recurring theme in Indian IPR literature is the need to balance private rights with public interest. Intellectual property creates temporary or continuing exclusive rights, but those rights operate within a larger social and economic framework. Bhat's analysis particularly demonstrates the importance of considering public health and access to life-saving medicines while examining patent protection.

The Indian approach therefore reflects an attempt to integrate innovation incentives with social objectives. This balance becomes particularly important in pharmaceutical patents, educational and research materials, digital content and technologies affecting essential public services. The literature suggests that a strong IPR system should not be measured solely by the number of registrations or enforcement actions; it should also be evaluated in terms of its contribution to innovation, competition, consumer welfare, accessibility and sustainable development.

1.10 Institutional Development And Administrative Effectiveness

The effectiveness of IPR protection depends significantly upon the capacity of intellectual property institutions. The annual reports of the Office of the Controller General of Patents, Designs and Trade Marks indicate continuing efforts towards technology-driven modernization, improved service delivery and stakeholder engagement. The 2024–25 report records substantial growth in intellectual property filings and identifies modernization of IP administration as a continuing priority.

The availability of successive annual reports also demonstrates the increasing importance of systematic institutional monitoring of India's intellectual property ecosystem.

The literature therefore suggests that legal reform must be accompanied by administrative efficiency. Delays in examination and registration, lack of awareness, procedural complexity, enforcement costs and limited access to professional IP services can reduce the practical value of statutory protection, particularly for individual creators, start-ups, small enterprises and traditional producers.

1.11 Emerging Issues In Indian Ipr Research

Recent scholarship indicates that Indian IPR research has become increasingly multidisciplinary. A 2025 review of research published in the *Journal of Intellectual Property Rights* covering 2023–2024 identifies continuing scholarly attention to copyright, patents, trademarks, geographical indications, designs, plant varieties, semiconductor layout designs, trade secrets, the National IPR Policy and Indian IP case law.

This indicates a broadening of the research agenda from conventional legal analysis towards questions of innovation policy, economic development, institutional effectiveness, technology and social welfare.

Emerging technologies, artificial intelligence, digital platforms, biotechnology and data-driven innovation are likely to further challenge conventional assumptions concerning authorship, inventorship, ownership and infringement.

1.12 Critical Evaluation Of Existing Literature

The existing literature provides a substantial foundation for understanding India's intellectual property regime. Earlier studies primarily concentrated on the evolution of Indian IPR law, India's compliance with TRIPS and the legal protection of individual categories of intellectual property. Subsequent scholarship expanded the discussion to innovation, pharmaceutical patents, public health, geographical indications, traditional knowledge and institutional administration.

However, several research gaps remain. First, much of the literature examines individual IPR categories separately, whereas contemporary innovation frequently involves overlapping forms of protection. Second, although legal provisions are extensively discussed, relatively fewer studies evaluate the practical effectiveness of IPR protection from the perspective of innovators, small businesses, traditional communities and consumers. Third, technological transformation is generating new questions concerning artificial intelligence, digital content, online infringement and ownership of technology-generated works. Fourth, there remains a need for stronger empirical research connecting IPR protection with measurable outcomes such as innovation performance, entrepreneurship, employment, technology transfer and regional economic development.

1.13 Research Gap

The review of existing literature reveals that considerable scholarship exists concerning the legal development and individual components of India's IPR regime. Nevertheless, there is scope for an integrated assessment of the effectiveness of intellectual property protection in India from legal, economic, technological and social perspectives.

In particular, further research is required to examine whether the existing IPR framework adequately balances the interests of rights holders with public interest, whether enforcement mechanisms are accessible and effective, how IPR protection influences innovation and entrepreneurship, and whether traditional knowledge and community-based intellectual assets receive adequate protection. The rapid growth of digital technologies also creates a need to reassess conventional concepts of ownership, authorship, infringement and enforcement.

Therefore, the present study can contribute to the existing body of knowledge by examining intellectual property rights in the Indian context through an integrated approach that considers legal development, institutional mechanisms, innovation, economic interests, public welfare, traditional knowledge and emerging technological challenges.

1.14 Conclusion

The literature demonstrates that intellectual property rights have evolved into a significant component of India's legal and economic development framework. The Indian IPR system has progressively adapted to international obligations while retaining important public-interest considerations. Existing studies establish the importance of patents, copyrights, trademarks, designs and geographical indications in promoting innovation and protecting commercial and creative interests. At the same time, scholarship concerning pharmaceutical patents, traditional knowledge and geographical indications demonstrates that intellectual property cannot be viewed exclusively as a mechanism for private ownership.

The contemporary challenge is to develop an IPR system that encourages innovation and investment while ensuring accessibility, competition, cultural preservation and social welfare. India's increasing volume of IP filings and continuing modernization of IP administration demonstrate the growing importance of the system. Future research should therefore move beyond a purely doctrinal examination of intellectual property law and evaluate its actual contribution to innovation, sustainable economic development and public welfare in India.

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