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# **A CRITICAL EVALUATION OF THE INCENTIVE AND MARKET FAILURE JUSTIFICATIONS UNDERLYING IP SYSTEMS**

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## **ABSTRACT**

Intellectual property fosters economic growth. It encourages innovation and regulates markets. In the absence of such “rewards”, there will be no creation, and eventually the markets would fail. Economic theories form the rationale behind why intellectual property rights exist and how they function. These theories often place the subject matter of intellectual property as public goods, which are non-rivalrous and non-exclusive, but consider the human intellect in refining them to be exclusive. Without protection, the refined labour of human intellect faces free riding problems, and without disclosure, society does not progress in the long run. Therefore, in a complex socio-economic set-up, IPR balances private reward with public benefit. This paper critically examines the dynamic efficiency of intellectual property while exploring Locke’s Labour Theory, utilitarianism, Schumpeter’s creative destruction, and the tragedy of the anticommons, among others. In conclusion, it acknowledges that information abundance must be harmonised with equitable diffusion to prevent market failures. The State must incentivise the creators, while controlling monopolistic distortions at the same time.

## Introduction

The antecedents of intellectual property extend far beyond mechanisms of creation and protection. On a micro perspective, IP incentivises innovators and safeguards creators. However, from a macroscopic lens, the evolution of intellectual property reflects a confluence of socio-economic and technological forces. Invention begins at an individual level, with creativity. It culminates at a commercial level when ideas get transformed into a marketable asset. Therefore, IP protection begins even before the production of commercially valuable innovations. This protection of the intangible is granted even before a tangible output emerges.

At this point of intersection of intellectual property and economics, two theories emerge as two ends of policy discussions. Incentive-based theory that focuses on free markets, and the market failure theory that has an interventionist focus. Free incentives will create excessive exclusivity and situations like a monopoly, while too much market corrections through government intervention would lead to underproduction because of the loss of incentives. This tension lies at the core of government failure and market failure debates. Intellectual property is a policy instrument that balances freedom and regulation, private control and public benefit.

## Information as an economic good

Information is a non-rival and non-exclusive economic good.<sup>1</sup> Usage by one consumer does not diminish its availability to another. Intellectual property emerges in the process of transforming this information from the public domain into protectable subject matter. This involves effort, investment, and risk-taking. The process is inherently rivalrous and exclusionary in nature, and consequently gives rise to a negative right to make information temporarily exclusionary. Thus, the reward is for the labour of human intellect that went into this transformation, and this creates the incentive and justifies the right.<sup>2</sup>

Further, intellectual property protection is not given to abstract ideas or facts themselves. The criteria are objectively defined by laws of different jurisdictions.<sup>3</sup> Certain qualitative aspects are also taken into account, like originality for copyright, novelty for patents, or distinctiveness

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<sup>1</sup> David Burk, *Law and Economics of Intellectual Property: In Search of First Principles*, 8 ANN. REV. L. & SOC. SCI. 397 (2012).

<sup>2</sup> Oliver Bennett, William Fisher, Teddy Kalaw & Jack Lerner, *Alternatives to Intellectual Property*, BERKMAN CTR. FOR INTERNET & SOC'Y (2001).

<sup>3</sup> *Supra*, at 1.

for trademarks. The categories of right granted, like economic or moral, and the enforcement mechanisms, are also specified. Therefore, the criteria for granting a temporary exclusionary protection are stringent, while the broader long-term purpose is inclusionary, which lets the refined information enter the public domain at a later stage.<sup>4</sup>

### **Information Asymmetries and Creative Destruction**

Information asymmetries exist in real market situations, where knowledge is distributed asymmetrically both in terms of control and accessibility. Schumpeter, however, did not consider this concentration or market power an indicator of market failure. He viewed them as a fundamental part of the capitalist engine that drives market growth and economic development. However, the process allows abnormal profits to be captured by a few during the subsistence of the intellectual property right.<sup>5</sup>

Schumpeter's theory on "creative destruction", based on the above premise, states that innovation "incessantly revolutionises the economic structure from within, incessantly destroying the old one, incessantly creating a new one."<sup>6</sup> This power is temporary, as competitors eventually observe and imitate the innovation, which Schumpeter calls the "swarms of imitators".<sup>7</sup> This leads to the diffusion of technology throughout the economy, eroding the initial innovator's market power till the next wave of disruptive innovation begins a new cycle.<sup>8</sup> Intellectual property rights play a balancing role between information economics and market regulation, between public access and the imperative of private reward.

### **Do intellectual property rights really create monopolies?**

Monopoly is an economic term, and not a legal concept. It describes a structure where a single seller or producer dominates the market by controlling the supply of a product or service with no close substitutes. This brings a form of static efficiency where the sole control gives the seller power to influence prices and limit competition. Except for public goods, which are

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<sup>4</sup> Johnathan Barnett, *The Illusion of the Commons*, 25 BERKELEY TECH. L.J. 1751 (2010).

<sup>5</sup> Leonardo Burlamaqui, *Intellectual Property, Innovation and Competition: Towards a Schumpeterian Perspective* (paper presented at WIPO "Open Forum on the Draft Substantive Patent Law Treaty," Geneva, Mar. 1-3, 2006) (draft), [https://www.wipo.int/export/sites/www/meetings/en/2006/scp\\_of\\_ge\\_06/presentations/scp\\_of\\_ge\\_06\\_burlamaqui.pdf](https://www.wipo.int/export/sites/www/meetings/en/2006/scp_of_ge_06/presentations/scp_of_ge_06_burlamaqui.pdf).

<sup>6</sup> Richard Alm & W. Michael Cox, *Creative Destruction*, LIBRARY OF ECONOMICS AND LIBERTY (Nov 14, 2025, 10:04 AM), <https://www.econlib.org/library/Enc/CreativeDestruction.html>.

<sup>7</sup> *Id.*

<sup>8</sup> *Supra* at 5.

mainly controlled by the government, this might lead to higher prices and lower outputs. IPR, on the other hand, only confers certain exclusive rights that can be exercised negatively. These rights may or may not translate into control over a relevant market. Only a legal possibility of exclusion or commercialisation is created, and the market outcome in the form of a monopoly depends on several other factors, like market substitutes and entry barriers.<sup>9</sup>

### **A Discussion on Static and Dynamic Efficiency through Theoretical Frameworks**

John Locke's Labour Theory of property, which has been extended to intellectual property as well, states that every individual is entitled to the fruits of their own labour when they create something after extracting raw materials from the commons. Locke questions how much a creator may appropriate from the commons and in what manner, such that "others are not left worse off". Enjoyment of life, liberty, and estate should not be at the cost of the spoilage of the remaining commons.<sup>10</sup>

Similarly, Utilitarianism justifies IPR because it creates incentives for creators to innovate and invest time and resources in new products in the expectation of a reward. When shared with society, those products create economic growth and technological advancement, leading to "the greatest good of the greatest number of people".<sup>11</sup>

These incentive-based reasonings were strengthened in the 1840s-80s, when IP became more central to economic growth. As discussed earlier, Schumpeter's theory added a new layer called *creative destruction* to this analogy. The Prospect Theory by Kitch complements the earlier theories further. He views the IP holder as a "prospector" who coordinates future investment. This mechanism is necessary to prevent both overuse and disincentive.<sup>12</sup>

The core premise behind incentive-based models is that a dynamic efficiency is achieved in the long run. It has its roots in static efficiency when monopolistic profits are reinvested into research and development, leading to technological progress. However, prolonged concentration of information may lead to restricted outputs and raised prices, generating

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<sup>9</sup> Pierre Barbaroux, *From Market Failures to Market Opportunities: Managing Innovation Under Asymmetric Information*, 3 J. INNOV. ENTREP. 5 (2014), <https://doi.org/10.1186/2192-5372-3-5>.

<sup>10</sup> JOHN LOCKE, TWO TREATISES OF GOVERNMENT BK. II, CH. 5, §§ 25–39 (1698).

<sup>11</sup> Robert P. Merges, *Justifying Intellectual Property*, HARVARD UNIV. PRESS (2011).

<sup>12</sup> WILLIAM W. FISHER, THEORIES OF INTELLECTUAL PROPERTY, IN NEW ESSAYS IN THE LEGAL AND POLITICAL THEORY OF PROPERTY 168 (Stephen R. Munzer ed., Cambridge Univ. Press 2001).

deadweight loss and excluding a segment of the consumers.<sup>13</sup> Static efficiency focusses on the optimal allocation of resources at a specific time through productive efficiency and allocative efficiency. While it is a measure of how well a system performs at present, the future improvement and technological challenges are not considered. The prices, however, are greater than the marginal cost of production. Therefore, a dynamic efficiency is desirable in the long run through market competition that drives innovation.<sup>14</sup>

### **Between the Regime of Commons and the Regime of Property: The Tragedy of Anticommons**

According to Hardin, common resources are depleted due to excessive use with no clear boundaries, a phenomenon known as the “tragedy of the commons”.<sup>15</sup> When applied to intellectual property, this raises the concern of unregulated exploitation of the public domain, where, in the absence of exclusionary control, creators have no incentive to create because of free riding. The response to this commons regime was the property regime, where rights and exclusions were introduced such that creators could appropriate value. However, excessive exclusivity has its own demerits. This phenomenon, as observed by Heller, is known as the “Tragedy of *Anticommons*”.<sup>16</sup> The existence of too many fragmented rights deters cumulative innovation, leading to a situation of underuse and lack of innovation.

Intellectual Property is faced with the dual challenge of preventing both depletion and enclosure, and this gives rise to a sharing-based regime. Patent pools, standard essential patents, or open source licensing balance controlled access with collaborative mechanisms. This resembles a transformation of (intellectual) property from collective ownership, as stipulated by Karl Marx,<sup>17</sup> to Mahatma Gandhi’s notion of trusteeship. Under the second notion, the creators hold intellectual property not as absolute owners, but as custodians serving the welfare of society.<sup>18</sup>

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<sup>13</sup> Joseph E. Stiglitz, *Economic Foundations of Intellectual Property Rights*, 57 DUKE L.J. 1693 (2008).

<sup>14</sup> *Id.*

<sup>15</sup> Michael Heller, *The Tragedy of the Anticommons: A Concise Introduction and Lexicon*, 76 MOD. L. REV. 6 (2013), [https://scholarship.law.columbia.edu/cgi/viewcontent.cgi?article=2779&context=faculty\\_scholarship](https://scholarship.law.columbia.edu/cgi/viewcontent.cgi?article=2779&context=faculty_scholarship).

<sup>16</sup> Russ Roberts, *Michael Heller on Gridlock and the Tragedy of the Anticommons*, ECON TALK (Nov. 2, 2009), <https://www.econtalk.org/heller-on-gridlock-and-the-tragedy-of-the-anticommons/>.

<sup>17</sup> KARL MARX & FREDERICK ENGELS, *SELECTED WORKS IN ONE VOLUME 35–62* (Lawrence & Wishart 1968), <https://www.marxists.org/archive/marx/works/sw/progress-publishers/sw.pdf>.

<sup>18</sup> M.K. GANDHI, *THE MIND OF MAHATMA GANDHI* (R.K. Prabhu & U.R. Rao eds., Navajivan Publishing House 1968), <https://www.mkgandhi.org/momgandhi/main.php>.

## How IP Corrects Market Failures: Striving for Pareto Optimality

From an economic perspective, IP innovation requires high fixed costs of production, while near-zero marginal cost of reproduction. If intellectual property protection is not extended, market forces would drive prices towards the near-zero marginal cost. Innovators would be unable to recover investments. From a Game Theory perspective, innovators face a prisoner's dilemma in such markets with no protection. All the competitors sit back and would rather copy than invest, to defect rather than coordinate.<sup>19</sup>

Such a situation of under-production would lead to market failure, which must be corrected by the government. IPR, therefore, enters as a correcting tool that generates incentives that create artificial price distortion. When this distortion is at an optimal level, like a situation of Pareto optimality, balance is maintained. The moment these price distortions are artificially raised too high, there will be underconsumption of knowledge. This cycle continues until a situation where all resources are most efficiently allocated, and prices are at an optimal point at the standard of Pareto Efficiency. However, one must be cautious that a situation being Pareto optimal merely assures no waste, but does not guarantee social welfare. Therefore, it should be taken as a measure of efficiency and not fairness, and the State should consider its other welfare functions while correcting information asymmetry-induced market failures.<sup>20</sup>

## FRAND Terms in SEPs: How IP Impedes Diffusion

A classic example of balancing between the theory of static and dynamic efficiency in the market of innovation is the FRAND (Fair, Reasonable, and Non-Discriminatory) licensing for Standard Essential Patents (SEPs). To ensure interoperability, it becomes essential for all manufacturers to use the patented technology, which is a part of the industry standard. The patentee in such cases acquires tremendous market power in the absence of any competitor. To prevent such an exclusivity approach, the standard-setting organisations mandate patent holders to commit to FRAND terms during licensing.<sup>21</sup>

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<sup>19</sup> Jonathan M. Barnett, *The Host's Dilemma: Strategic Forfeiture in Platform Markets for Informational Goods*, 124 HARV. L. REV. 1861 (2011).

<sup>20</sup> *Id.*

<sup>21</sup> Giuseppe Colangelo, *The Politicization of IP Protection: The Case of Standard Essential Patents*, INT'L CTR. FOR L. & ECON. (2024), <https://laweconcenter.org/resources/the-politicization-of-ip-protection-the-case-of-standard-essential-patents/>.

Typically, “fair” terms ensure that royalty rates reflect the actual technological contribution of the product, and ensure that the patentee does not misuse or take advantage of its power in the bargain. “Reasonable” terms are used to prevent hold-up situations. In cases where patentees want to exploit the indispensability of their inventions, these terms ensure that the royalty value is at a level consistent with market value prior to standard adoption.<sup>22</sup> The non-discriminatory elements guarantee equal treatment for all licensees. This preserves downstream competition. In this context, China’s hedonic regression models for IP valuation in cases of SEP disputes may be discussed. In this method, it is analysed how technological features contribute to product pricing. This helps in the determination of the royalty under FRAND licensing terms.<sup>23</sup>

Therefore, FRAND ensures both static and dynamic efficiency. On one hand, incentives for innovation help preserve dynamic efficiency, while on the other, static efficiency is maintained by keeping access open and pricing competitive. The mechanism is a hybrid balance between regulatory intervention and private bargaining through contract.<sup>24</sup>

### **The Interface between Intellectual Property and Competition Law**

If FRAND contractually balances access and innovation, competition law is its structural counterpart and the systematic corrector. Competition law intervenes when intellectual property protection exceeds its legitimate scope, to ensure market dynamism and preserve consumer welfare. Reverse payment settlements of pay-for-delay agreements are a classic example under this. Competitors, through “collusive settlements”, turn legitimate patent rights into a market allocation device. To regulate this, while the Patents Act, 1970, controls the right in rem, the Competition Act, 2002, controls the rights in personam. The Competition Commission of India, as a regulatory body, examines market conduct under sections 3 and 4.<sup>25</sup>

The doctrines, such as the Rule of Reason and the “by object” tests, are used by competition regulatory authorities in these cases to undertake a behavioural analysis of exclusivity. Such analyses essentially consider whether a restriction is reasonably necessary to protect innovation

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<sup>22</sup> *Id.*

<sup>23</sup> J. Gregory Sidak & Jeremy O. Skog, *Hedonic Prices and Patent Royalties*, 2 *Criterion J. ON INNOVATION* 601 (2017), [https://law-economic-studies.law.columbia.edu/sites/law-economic-studies.law.columbia.edu/files/content/docs/sidak\\_hedonic\\_prices\\_and\\_patent\\_royalties.pdf](https://law-economic-studies.law.columbia.edu/sites/law-economic-studies.law.columbia.edu/files/content/docs/sidak_hedonic_prices_and_patent_royalties.pdf).

<sup>24</sup> Christopher S. Yoo, *Public Good Economics and Standard Essential Patents*, FACULTY SCHOLARSHIP REPOSITORY, UNIVERSITY OF PENNSYLVANIA LAW SCHOOL (2014), [https://scholarship.law.upenn.edu/faculty\\_scholarship/1371/](https://scholarship.law.upenn.edu/faculty_scholarship/1371/).

<sup>25</sup> Sakshee Sahay, *Intellectual Property and Anticompetitive Practices: A Study of Abuse of Dominance in the Indian Market* (2024), <https://ssrn.com/abstract=5272911> or <http://dx.doi.org/10.2139/ssrn.5272911>.

(i.e., the action is within the scope of the intellectual property right), or it creates an artificial barrier to entry. As established through precedents such as **K-Dur**<sup>26</sup> and **Actavis**,<sup>27</sup> the burden is on the patent holder to justify the pro-competitive intent. Precedents like **Shamsher Kataria**<sup>28</sup> enable IP settlements to be evaluated within the parameters of public law.

Article 40 of TRIPS and Article 10bis of the Paris Convention regulate anti-competitive market behaviour. Articles 7 and 8 of TRIPS also serve as safety valves, promoting “social and economic welfare” and ensuring “technology dissemination”.<sup>29</sup> Article 39(b) of the Indian Constitution, similarly, resonates with equitable distribution of material resources for the common good. Through various such national and international legal provisions, information asymmetries in unfair competition are sought to be regulated.

### **IP Governance Requires a Pluralistic Framework: The Post-Scarcity Paradox**

Historically, the pharmaceutical industry is driven by intense internal competition and isolation. The technology sector is more collaborative, characterised by open source software and standardisation. The fashion industry grants weak and limited protection due to the rapid pace of trends and “copying”. Contrarily, trademarks grant perpetual rights if renewed. Therefore, only a framework reoriented towards the sectoral diversity in IP can prevent diffusion.

This traditional approach is changing in the digital era. A post-scarcity paradox occurs due to the abundance of technology that meets all basic needs. Therefore, the scarcity that is left is not material but symbolic, to meet the needs of the consumers in the market. Replication is costless in the age of the Internet. In theory, music, software, or designs could be freely accessible to all. However, IPR continues to create artificial exclusivity to sustain economic and social hierarchies.<sup>30</sup> Take, for instance, the shutdown of Libgen and Sci-Hub through court orders.

Broadly speaking, material scarcity no longer exists today. What does exist is social scarcity, the human desire for distinction and uniqueness. The consumers do not merely pay for the

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<sup>26</sup> *In re K-Dur Antitrust Litig.*, 686 F.3d 197 (3d Cir. 2012).

<sup>27</sup> *FTC v. Actavis, Inc.*, 570 U.S. 136 (2013).

<sup>28</sup> *Shamsher Kataria v. Honda Sael Cars India Ltd.*, 2014 SCC OnLine CCI 95.

<sup>29</sup> N.E. Zevgolis, *The Interaction Between Intellectual Property Law and Competition Law in the EU: Necessity of Convergent Interpretation with the Principles Established by the Relevant Case Law*, MULTI-DIMENSIONAL APPROACHES TOWARDS NEW TECHNOLOGY 19 (A. Bharadwaj, V. Devaiah & I. Gupta eds., Springer 2018), [https://doi.org/10.1007/978-981-13-1232-8\\_2](https://doi.org/10.1007/978-981-13-1232-8_2).

<sup>30</sup> Mark A. Lemley, *IP in a World Without Scarcity*, 90 N.Y.U. L. REV. 460 (2015), <https://ssrn.com/abstract=2413974> or <http://dx.doi.org/10.2139/ssrn.2413974>.

functional utility of the IP, but for its “semiotic capital”: a capacity that signifies authenticity of the property. The basis of this transformation is found in Veblen’s theory of conspicuous consumption<sup>31</sup> and Bourdieu’s concept of “distinction”. The core idea is, when someone owns a scarce good, it signifies a symbol of higher social hierarchy.<sup>32</sup> The function of intellectual property, thus, also shifts from the primary function of perpetuating access to culture and knowledge. It turns into a law of perception from a law of production.

### Discussion through Precedents

Indian courts have often linked patent rights with the interests of people. In landmark discussions like evergreening in **Novartis**<sup>33</sup> to compulsory licensing in **Bayer**,<sup>34</sup> the endeavour was to balance access and innovation. Similarly, for agro-biotech and pharmaceutical industries, there are precedents like **Cipla v. Roche**<sup>35</sup> and **Monsanto v. Nuziveedu**<sup>36</sup>. On similar lines, there are copyright precedents. For instance, the shift from one-time assignment to continuing royalties through collective licensing was discussed in cases like **IPRS v. Eastern Indian Motion Pictures**<sup>37</sup> and **IPRS v. Rajasthan Patrika**.<sup>38</sup>

Idea expression dichotomy forms an interesting example of how, without fixation, there can be no exclusivity. Mere ideas or efforts are not granted protection, as discussed in **Eastern Book Co. v. D.B. Modak**<sup>39</sup> and **R.G. Anand v. Delux Films**.<sup>40</sup> Trademark and Design Laws also address information asymmetry from the perspective of brand investment and preventing consumer confusion through deceptive similarity. The doctrine of exhaustion, which states that mainly the distribution rights of IP are extinguished after the first sale, is also an example of how the market is regulated by the State. Landmark precedents in this regard include **Godfrey**

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<sup>31</sup> Scott Zimmer, JD, *Veblen's Theory of Conspicuous Consumption*, EBSCO POLITICAL SCIENCE RESEARCH STARTERS (2017), <https://www.ebsco.com/research-starters/political-science/veblens-theory-conspicuous-consumption>.

<sup>32</sup> David Gartman, *Bourdieu's Theory of Cultural Change: Explication, Application, Critique*, 20 SOCIOLOGICAL THEORY 255 (2002), <https://www.jstor.org/stable/i356210>.

<sup>33</sup> *Novartis AG v. Union of India*, (2013) 6 SCC 1.

<sup>34</sup> *Bayer Corporation v. Natco Pharma Ltd. & Ors.*, (2014), OA/35/2012/PT/MUM, Bom HC.

<sup>35</sup> *F. Hoffmann-La Roche Ltd. v. Cipla Ltd.*, FAO(OS) 188/2008, (2015) Del HC.

<sup>36</sup> *Monsanto Tech. LLC v. Nuziveedu Seeds Ltd.*, (2019) 3 SCC 381.

<sup>37</sup> *Indian Performing Right Soc’y Ltd. v. E. India Motion Pictures Ass’n*, (1977) 2 SCC 820 (SC).

<sup>38</sup> *Indian Performing Right Soc’y Ltd. v. Rajasthan Patrika Pvt. Ltd.*, FAO(OS)(COMM) 86/2023 (2023). Del HC.

<sup>39</sup> *Eastern Book Co. v. D.B. Modak*, (2008) 1 SCC 1.

<sup>40</sup> *R.G. Anand v. Deluxe Films*, (1978) 4 SCC 118.

**Philips**<sup>41</sup> and **Whirlpool**.<sup>42</sup> Similarly, **ITC v. Philip Morris**<sup>43</sup> and **Maharashtra Hybrid Seeds**<sup>44</sup> tried to correct measures that distort market access. Overall, intellectual property, unlike physical property, is not treated as an absolute right, but as an economic regulation that adjusts innovation and public good.

## Conclusion

These approaches echo the Aristotelian developmentalism, where vital economic gain is achieved through enhancing the quality of life through knowledge. The end goal of any society is the development of scientific temper and the spirit of inquiry. This leads to a utilitarian equilibrium of rationality constraint. As Thomas Jefferson remarked, sharing an idea “does not make one poorer”. A true IP incentive, therefore, is one that facilitates the perpetuation of creativity, creating positive externalities and spillovers. Instead of draining the common pool known as the public domain, they enrich it. Ultimately, intellectual property has to fulfil its dual functions of incentivising creativity and preventing market failure.

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<sup>41</sup> *Godfrey Philips India Ltd. v. Girnar Food & Beverages (P) Ltd.*, (2004) 5 SCC 257.

<sup>42</sup> *N.R. Dongre v. Whirlpool Corp.*, (1996) (5) SCC 714.

<sup>43</sup> *ITC Ltd. v. Philip Morris Prods. SA*, (2010) (42) PTC 572 (Del).

<sup>44</sup> *State Of Maharashtra and Others v. Maharashtra Hybrid Seeds Co. Pvt. Ltd.*, (2019) INSC 945.

**BIBLIOGRAPHY**

- Annette Kur, Nari Lee & Anna Tischner, *The Role of Empirical Evidence, in Fairness in Intellectual Property Law: Searching for a Uniform Concept* (Edward Elgar Pub. 2024).
- David Burk, *Law and Economics of Intellectual Property: In Search of First Principles*, 8 ANN. REV. L. & SOC. SCI. 397 (2012).
- Jonathan M. Barnett, *The Host's Dilemma: Strategic Forfeiture in Platform Markets for Informational Goods*, 124 HARV. L. REV. 1861 (2011).
- Joseph E. Stiglitz, *Economic Foundations of Intellectual Property Rights*, 57 DUKE L.J. 1693 (2008).
- Oliver Bennett, William Fisher, Teddy Kalaw & Jack Lerner, *Alternatives to Intellectual Property*, BERKMAN CTR. FOR INTERNET & SOC'Y (2001).
- Pervez Zamurrad Janjua & Ghulam Samad, *Intellectual Property Rights and Economic Growth: The Case of Middle Income Developing Countries*, 46 PAK. DEV. REV. 711 (2007).
- Pierre Barbaroux, *From Market Failures to Market Opportunities: Managing Innovation Under Asymmetric Information*, 3 J. INNOV. ENTREP. 5 (2014), <https://doi.org/10.1186/2192-5372-3-5>.
- Robert P. Merges, *The Economic Impact of Intellectual Property Rights: An Overview and Guide*, 19 J. CULTURAL ECON. 103 (1995).
- World Intellectual Property Organization (WIPO), *The Economics of Intellectual Property: Suggestions for Further Research in Developing Countries and Countries with Economies in Transition* (WIPO 2009), <https://www.wipo.int/publications/en/details.jsp?id=4331>.
- WIPO, *World Intellectual Property Indicators 2012* (WIPO Economics & Statistics Series 2012), [https://www.wipo.int/edocs/pubdocs/en/intproperty/941/wipo\\_pub\\_941\\_2012.pdf](https://www.wipo.int/edocs/pubdocs/en/intproperty/941/wipo_pub_941_2012.pdf).