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Economic Approach of Interface between IPR and Competition Law

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Abstract: The major goal of this paper is to give a monetary analysis of Intellectual Property (IP) Right Law along with its connection to Competition Law. Here, we've tried to distil some key ideas and propose some basic principles that might inform the development and implementation of IP and antitrust regulations. While this approach cannot be said to take into account every nuance of Intellectual Property Law or every possible competitive circumstance, it does provide some helpful overarching ideas.[1]Innovations in the application of existing knowledge have been the driving force behind the economy's recent growth and development. The internet, biotechnology, ICTs, and many other technological advances are pivotal in today's economy. To encourage the production of new forms of knowledge, an economic model based on intellectual property rights would provide substantial rewards to those who create them. Maintaining economic development requires striking a balance between keeping such information secret and quickly spreading it around to businesses that can put it to use[2]

Keywords: Intellectual Property Rights, Innovation, Competition Policy, Economic development, Technology, Economic Growth.

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I. Introduction

In recent decades, the globe has changed dramatically. The materialistic past has given way to the knowledge-based present. Today, we are in the middle of an information revolution. Creating intellectual property involves translating ideas into something that can be used in business. Intellectual property, the product of human ingenuity, has emerged as a critical factor in people's daily lives and the global economy. IP rights are kind of intangible property right that protect economic value of works created by human ingenuity.[3]

Kamil Idris[4] rightly remarks: With the turn of the century come new possibilities and problems, most notably the ever-expanding boundaries of the global economy, which has grown (some would say exploded) beyond anyone's wildest dreams. Conventional thinking had it that at a certain point the economy would stabilize and cease to grow much further. However, it has beguiled many of the manner in which it has consistently evolved and reinvented itself, providing new opportunities and credible means for the still rapidly growing population to continue to survive, thrive and prosper.

II. The Role of Technology in Economic Growth

Sustained economic growth is driven by a rise of scientific as well as technological knowledge, or more understanding about how to manufacture goods that people desire. The importance of technology as a catalyst for economic growth is now more generally recognised than ever before, thanks to the plethora of new possibilities. Most of the value of new items comes from intangibles like technology. It doesn't matter whether the economy is growing or shrinking, a steady supply of innovative ideas and goods that raise the standard of living is essential to economic development. An innovation might be a simple tool or a complex piece of machinery. There is now substantial evidence to support the claim that innovation and creativity help countries and businesses gain a competitive edge. Innovation, rather than collective capital investment, is what drives the economic growth of countries on a per capita basis. Many nations' current economic success has not resulted from their natural resources. Neither tin nor rubber nor are they necessary for economic success today. Oil-producing countries, and other resource-rich nations, are no longer automatically among the world's leading economic powers.[5]

III. The Role of Intellectual Property Rights (IPRs) in Economic Growth

The originality and rarity of intellectual capital contribute to its high market value. Integrated circuit topographies, pagan of origin, Knowledge about the company's personnel, client lists, training systems and

procedures, quality management systems, distribution networks, etc., as well as patents, utility models, industrial designs, trademarks, copyrights, and other proprietary technologies. As countries and corporations develop new plans, the importance of appraising and valuing IP rights (such as invention, trade secrets, know-how, trademarks, industrial designs, etc.) grows. As a result, IPRs play a far bigger part in cross-border trade and commerce. Many of the biggest and most influential corporations in the world today acknowledge that intellectual capital is one of their most valuable assets. Novel-financing strategies and mergers have highlighted the importance of IP portfolios in businesses, since these transactions are founded on licencing agreements and joint ventures including the transfer of technology. Today, businesses increasingly need to have their IPRs valued in order to get financing or have their true value determined. At the business level, it is becoming clearer that rigorous and active management over technology new processes and products, as well as the ongoing upgrading and introduction of new ones, is essential for long-term competitiveness. Tech advancement was seen as an exogenous factor in neoclassical economics. This viewpoint, which treats technological advancement as a "free benefit," conflicts with the conventional wisdom about how economies expand today. Technology advances due to entrepreneurial efforts made in the hope of making a profit from new developments; this is a well-accepted fact at this point. The intellectual property system helps facilitate the spread of new innovations by creating a legal framework that encourages the sharing of ideas of new products. "Intellectual property" (IP) term is used to describe works of human creativity that may be materialised in many forms, distributed to various places, and used by multiple people simultaneously. Limitations, such as the finite lifespan of copyrights and patents, are characteristic of IP law, just as they are of the law pertaining to movable and immovable property.[6]

IV. The Role of IPRs in Promoting Socio-Economic Development

Planning, forecasting, and developing suitable industrial and commercial strategies are given a higher priority in today's extremely competitive international trade environment. The construction and growth of a technology foundation commensurate with the capabilities and prospects of each nation rely increasingly on this kind of well-thought-out strategic planning. Therefore, increased focus has been placed on the industrial property system for decision making. The two primary causes, consider:

A) Firstly, patent system's informational aspect may help scientists avoid repeating efforts if the technology they need already exists by making them aware of the state of the art in that sector. In addition, it may inspire new developments and provide light on rivals' technical pursuits or, through a look at the countries wherein patents were filed, rivals' promotional tactics. A thorough study of the current state of the art will reveal emerging technological fields that need close monitoring of ongoing R&D efforts.

B) Second, the statistical aggregate of patenting activities as disclosed by public patent papers may be highly beneficial for strategic decision making and industrial planning using the industrial property system. Registered trademarks are evidence of economic interest in the market, and the number of patents issued by a country or company is an indicator of that interest. Many policy and investment choices may be put to the test with the use of analyses concerning IPR and their existence in various nations.

Since inventions are the foundation of technology, we may think of them as both individually owned and collectively beneficial. Because of the time and energy required to make them, those resources cannot be used for public good production or consumption, making them private goods. Once a technological advancement or innovation has been made publicly accessible in the form of knowledge and a public benefit, it may be utilised by anybody without causing harm to anyone else or requiring any further resources be spent on reproducing it. A problem arises when it is unclear who will pay for the development of new technologies and innovations if their usage is permitted by everybody. Giving inventors exclusive commercial rights for a certain amount of time in return for public disclosure is a key mechanism of patent system, which aims to inspire the making of new technologies. If the inventor has exclusive legal right to make money off of their creation, he or she can get to work on it without worrying about copycats who didn't have to pay for the same amount of research and development. As a result, the creator will have a better chance of recouping their investment in R&D by enjoying a market edge. In this way, the granting of patents serves as a tool of economic policy, encouraging entrepreneurs to take risks with their money as they experiment with new ideas for goods and technologies. The technical merits of an invention are the basis for its patentability. While patent holders are granted exclusive rights over the commercial exploitation of their invention, they do not have protection against those who legitimately adapt or improve the technology disclosed in the patent.

Generally, it is agreed that the benefits to society from granting temporary exclusive rights to select individuals outweigh the costs to society. This is because the benefits generated by this exclusivity more than compensate for any economic drawbacks or dangers that "exclusive rights" could entail. For the most part, the industrial property system serves as a method to:

(i) safeguard as well as encourage intellectual creativity;

(ii) increase capital investment by protecting inventors against copycats and allowing risk-takers to go on with mass manufacturing of their patented creations;
(iii) provide customers with the results of creative effort via the widespread distribution of improved products;
(iv) Create a public "database" of new innovations and technology to facilitate the rapid and widespread dissemination of innovative ideas and developments.
In addition, the IP system paves the way for the dissemination of technologies by fostering trust and openness in business dealings.
The patent system aids economic expansion and development in several ways by facilitating the practical and marketable use of ideas:
(i) it provides a stimulus for innovation in technology, leading to, among other things, novel goods, novel inventions, and novel business possibilities, or;
(ii) It helps establish a legislative framework that supports investment, both domestically and internationally, and fosters an atmosphere conducive to the commercialization of innovations and cutting-edge technologies.
(iii) Essentially, it speeds up the process of bringing new ideas to market.; -
(iv) It is a tool for corporate and industrial strategists.
Patents should be seen as a policy tool that gives domestic innovators, R&D institutions, and businesses a competitive advantage in the global market. In reality, it serves as a formidable barrier to the expansion of non-globalized, domestically-innovative enterprise, whatever modest its current size may be.
Instead of being a fast solution, the patent system is an option in the long health of a country's economy. Without a patent system, innovators, business owners, and corporations would be unprotected against copycats, and there would be less motivation to engage in technical growth and advancement. Without a patent system, it's reasonable to assume that fewer ideas would be made by local creators. To foster growth in the IT industry, The patent system is an essential component of the market's underlying infrastructure and must be treated as such.[7]

V. Intellectual Property Protection System as a Part of The Infrastructure

In his book "Intellectual Property and Economic Development," Washington's Counselor for International Business, Robert M. Sherwood, came to the following conclusion: "An IP system must be part of a country's infrastructure from the outset, rather than something thought about after reaching a fairly advanced state of development."
• IP system that preserves original thought and expression might be seen as a necessary but often overlooked prerequisite for the creation and deployment of innovative technologies that promote both economic expansion and social progress. From this vantage point, a country's IP protection regime may be seen as an important cog in the machinery of progress.
• When analysing economic growth, the idea of infrastructure has shown to be beneficial. Some of the necessities for progress include infrastructure including roads, irrigation, sewage, schools, water supply, healthcare, and electricity. As a result, we are prioritising the in-house restructuring and creation of new jobs.
• "It is submitted that viewing intellectual property protection as an important aspect of a country's infrastructure would focus attention and analysis on its role in the economic development process rather than on trade conflicts".
It's important to remember that this took place before the contemporary industrial revolution, when most of the world's developed and industrialised nations were still backwaters.[8]

VI. Economic Analysis of Intellectual Property Rights

Protection of one's intellectual property is crucial in today's technologically advanced economy. The idea that IPR were crucial to enhance industrial and economic progress led to their introduction. Economists worry about the "free rider" issue that would occur if everyone was permitted to freely utilise the fruits of innovation and creativity. Because of the risk of falling behind the competition, no one would spend money on innovation or creativity unless there was absolutely no other option. Protecting the fruits of human labour via property rights is essential for competition to serve as a market regulator. Intellectual property rights are particularly valuable because they combine a monopolistic nature with the ability to be individually transferred and resold. While possessing IPRs does provide a temporary monopoly for the IPR holder, such monopoly is not total and is threatened by the existence of identical goods, trademarks, etc. Competition from similar technology means that any gains made from the exclusive use of an innovation are unlikely to be monopolistic rents. The second scenario occurs when an innovation is so ground-breaking that there is a (indefinitely temporary) complete absence of any suitable substitutes.

The owners of IP do not get an assured return on investment since these rights are supply and demand driven. The incentive they provide for creative work is conditional on the degree of rivalry in the given market.

The inventor will get financial benefits from his creation only if the market recognises its worth. "*The ownership of intangibles in the sense of abstract property rights… is therefore limited to a temporary, ephemeral competitive restriction".*While intellectual property rights may provide for a degree of exclusivity, they seldom provide the holder of such rights a true monopoly in which they are free to behave arbitrarily without fear of retaliation from their rivals.

In addition, rivals will wait for others to invest in the discovery and manufacture of goods if IPRs are not granted temporary monopolies. Competitors will appreciate the process without worrying about the future of their investment. Knowledge sharing has a negligible financial impact.

Since new ideas and inventions are crucial to economic growth in a free market economy, their dearth would be said to impair the economy's overall performance. It follows that, from this point of view, productive innovation is essential to economic development and success. For products and services to be produced and used in such an economy to the fullest extent feasible, intellectual property rights must be established. Individuals and businesses will be more likely to spend in R&D if they know they will have a property right in the findings; those who are best able to monetarily capitalise on the invention should be awarded such rights. Creators and inventors are usually rewarded for their efforts because they are presumed to have been driven by a desire to make money off of their creations or innovations, either by doing so themselves or by licencing their work to others.[9]

VII. Economic Perspective of IPR and Competition Policy

As the digital economy becomes more important as a growth engine, competition authorities are shifting their attention to high-tech and intellectual property-intensive businesses.[10] Competition and IP rules have been at odds for a long time, and this helps to alleviate that tension. Because they shield creators from certain types of rivalry, IP rights run counter to the conventional wisdom that more affordable goods and services are always better for consumers.[11] However, competitive law and policy stimulate the innovation that IP rights foster, making this seeming contradiction less significant than it otherwise would be. Both programmes' overarching goals are to boost consumer happiness, the economy, and new ideas.[12]

However, the relation of competition and IP law presents complex issues due to the interplay between the two systems. Over time, perspectives on the interplay between antitrust and IP laws have shifted from a strict adherence to formalistic norms to a more nuanced consideration of the practical implications of IP-related activities. As the economy shifts, new business practises emerge, and anticompetitive behaviours are uncovered, new difficulties at the intersection of competition and IP laws continue to emerge.

As a matter of consensus, innovation and technical advancement are the most crucial factors in national economic development.[13] Policies that encourage innovation have the potential to reap substantial profits for society, as shown by studies showing that the social returns on investment in R&D not only surpass but much outstrip private returns.[14]

All intellectual property rights are based on a balancing act between safeguarding the rights of the original author and encouraging further, cumulative advances.[15] The goal of any intellectual property right is to encourage more creative and innovative work while also safeguarding the rights of the original inventor.[16] Patents are the gold standard of intellectual property rights. As one definition puts it, "a limited monopoly that is provided in consideration for the disclosure of technical knowledge" is common thinking way about patent system in particular.[17]

One of the key reasons in favour of patents as a tool of fostering innovation is that they provide inventors a temporary monopoly on the products of their R&D. A patent is a legal document that protects the novelty of an invention by allowing its owner to exercise monopoly over its manufacture, use, and sale within the country where the patent application was filed for a certain length of time (often twenty years). Only original, non-obvious, and practical innovations should be awarded patents.

However, publication of information relating to the invention in the body of the application is a prerequisite for the awarding of patent rights, which encourages further innovation. Specification "claims" define the innovation. The claims of a patent outline the territory that is covered by the patent. To further protect follow-on innovation and other public goals, the IP regime also contains exceptions to the exclusive rights it grants – such as fair and public interest uses. Lastly, the IP regime allows a number of mechanisms through which cooperation and follow-on innovation can be promoted during the period of exclusivity – e.g. cross-patenting, technology and patent pools, and standard-setting bodies.[18]

Free and open competition in marketplaces is a further factor in economic growth. Despite a growing corpus of study on the issue, the question of how much rivalry affects creative output remains open.[19] There is literature that, following Schumpeter, claims that competition discourages innovation because the prospect of foregone monopoly revenues undermines the motivation to do so.[20] One alternative, which draws on Arrow's work, holds that competition and innovation should go hand in hand since companies are motivated to innovate in order to stay ahead of the pack..[21] According to the available evidence, Evidently, the association between

market structure and innovation varies from sector to industry. Although the inverted-U model has been gaining popularity, it is still important to remember that this is only a broad outline, and that specific outcomes will depend on factors such as the specifics of the innovation, the industry where it is used, the level of competition within the industry, and so on.[22]

In a brief, the theoretical dispute on the link between innovation and competition is not solved by the actual facts. There does not seem to be a uniform answer to the issue of how competition impacts innovation. Depending on the specifics of the situation and the underlying assumptions, competition may either stimulate or stifle innovation.[23]

The relevance of connection between innovation and competition for antitrust policy was questioned,[24] as has the taking into account of innovation as a relevant consideration in competitive assessments.[25] Yet, given competition law's goals, including increasing consumer welfare, innovation is an unavoidable topic. Companies in IP-intensive as well as high technology sectors fight less on price and production and more on R&D of new products, and as a result, competition enforcement has changed to concentrate on these sectors. This is due in no little part to the digital economy's rising profile as a key sector fuelling explosive expansion. The effects of the digital economy are not limited to the provision of informational products and services. Therefore, competition authorities have started to pay more attention to problems related to the digital economy and competition.[26]

Since competition is seen as a key role in innovation, supporters of Arrow and, to a lesser degree, Aghion et al., believe antitrust authorities should play a significant role in encouraging new ideas. This is due in large part to the inverted U-shaped connection between innovation and market concentration. The majority of antitrust actions are targeted at somewhat concentrated markets, which are those with the most potential for enhanced innovation and competition. Thus, By addressing as well as removing anticompetitive obstacles established by private organizations in markets that prioritise innovation, competition authorities create the ground for progress as well as innovation.[27]

On the other side, those who agree with Schumpeter's view that monopoly is essential to innovation tend to think antitrust law has little if any influence. This view considers monopolies to be temporary, with new ones constantly emerging via creative destruction. However, antitrust does not necessarily have no effect in safeguarding innovation if the Schumpeter hypothesis is taken into account.[28] However, even with this perspective, antitrust should play a role in making sure that dominant corporations aren't impeding the creative destruction process [29]

In a brief, competition policy and law and IP policy and law are mutually supportive due to their shared goal of advancing the state of the art in technological innovation for the sake of consumers. However, IP rights cast doubt on the validity of several long-held beliefs on the strengths of free markets. The overarching goal of competition policy is to protect the gains that customers get through marginal cost pricing in free-market economies. Conversely, the purpose of IP laws is to ensure that society reaps the advantages of new inventions and innovations by shielding their creators from certain types of competition and enabling them to charge premium prices for their wares for a limited time [30]

Whereas this seems to be at contradiction with competition regimes, numerous people consider IP rights as crucial to the success of today's technologically sophisticated economies, and good competition policy accounts for the need of IP protections.[31] This is acknowledged by a few different policy tools. It has been established throughout Europe that:

"*Innovation constitutes an essential and dynamic component of an open and competitive market economy. Intellectual property rights promote dynamic competition by encouraging undertakings to invest in developing new or improved products and processes. So does competition by putting pressure on undertakings to innovate. Therefore, both intellectual property rights and competition are necessary to promote innovation and ensure a competitive exploitation thereof.*" [32]

The Antitrust Guidelines for Intellectual Property Licensing in the United States provide that:

"*The intellectual property laws and the antitrust laws share the common purpose of promoting innovation and enhancing consumer welfare. The intellectual property laws provide incentives for innovation and its dissemination and commercialization by establishing enforceable property rights for the creators of new and useful products, more efficient processes, and original works of expression. (…) The antitrust laws promote innovation and consumer welfare by prohibiting certain actions that may harm competition with respect to either existing or new ways of serving consumers.*" [33]

Competitors agencies' actions that infringe on IP rights are seldom contested in the modern day. No matter how deep they delve into IP territory, competition authorities have the issue of reducing the anticompetitive impacts of IP rights while yet honouring their existence and the social purposes they are designed to promote. To make room for intellectual property rights, competition regimes all over the globe have developed exclusions or exceptions that provide a measure of insulation from competition law for the legitimate use of IP. Incentives for innovation are necessary to justify this protection, but the need to maintain healthy competition is paramount.[34]

Over past decades, the limitations of a formalistic approach to be competition/IP interface were recognised, and approaches based on economic knowledge established themselves around the world. As noted by Anderson and Kovacic:

"The evident evolution of competition policies and enforcement approaches vis-à-vis IPRs over the past several decades derives first and foremost, we suggest, from a far-reaching process of economic learning that has taken place during the same period. The learning process has encompassed, in addition to other aspects: (i) improved understanding of the role and effects of vertical licensing practices and single-firm exclusionary conduct, including new understanding of the harmful effects of a range of specific practices associated with the exercise of IP; (ii) a far more subtle understanding of the role of intellectual property itself in relation to market power and its exercise than competition agencies once held; and (iii) a better appreciation of problems associated with IP regimes themselves, and the role that both competition enforcement and advocacy work can play in addressing adverse implications for competition, innovation and the diffusion of new inventions and creative works." [35]

Nowadays, one can speak of a high-level global consensus on the relationship between competition and IP laws around the world, based on the following precepts:

- Owning intellectual property (IP) does not automatically confer market dominance, though. Several patents were granted for ideas that never gained traction in the market, much alone dominated it. In addition, a patent cannot shield an innovation from competition from non-infringing alternatives, some of which may be better in quality and/or price.
- As a result, it should come as no surprise that patents often do not provide monopoly status.[36] Competition authorities, like with other types of property, are increasingly focusing on whether or whether there are near alternatives that can limit the capacity of an IP right owner to exert market dominance.
- Case-by-case evaluations of the consequences of IP-related activities have superseded form-based techniques.
- The United States Federal Trade Commission (FTC) and Department of Justice, the European Commission, the Canadian Competition Bureau, and other prominent competition agencies have invested heavily in advocacy efforts to protect the legitimacy of patent systems and prevent the granting of patents for dubious inventions which could harm competition or stifle further innovation without any compensatory benefits.[37]

Concurrently with these changes, the connection between IP law and competition rose to prominence as a result of the accelerating digitalization of the economy and the increasing value of intangible assets. Over the last several years, regulators and enforcement agencies have been focusing less on licence agreements and more on other IP-related behaviours and situations that are seen as carrying high risks of anti-competitive effects.

In other ways, we can be in the midst of an economic environment where non-patentable IP rights are becoming more and more important for comprehending the economy and, therefore, for competition analysis. When assessing specific competition cases, setting enforcement priorities, and most importantly, advocating for reform of IP systems to ensure they only promote innovation and consumer welfare, knowledge of the relative importance of different IP rights in different economic sectors can be useful tools.

VIII. Concluding Remarks

As a result of this constant push for innovation, the market continues to expand and new products are introduced often. Thus, innovation is a goal of competition policy. Competition involvement in the IP field is crucial to economic development and prosperity because it influences both the pace of invention and the rate at which new technologies spread across the economy. IP's function and the associated applications of competition policy are so intricately interconnected and reliant on one another that neither can be properly understood or used in isolation. [38]

Particularly, competition policy should maintain a balance between the benefits to innovation which IP rights may provide and the hazards that they might be exploited to reinforce or gain dominance via anticompetitive ways. Some issues with IP right market competitiveness may be best addressed by revising the patent system. However, competition concerns that endanger innovation as well as consumer welfare call for a calibrated use of enforcement of competition law against abuses of intellectual property rights.

However, there is a challenge in identifying just how far competition legislation should step in when IP rights are at risk. The problem of defining the appropriate role for competition law in these marketplaces is complicated by the lack of clarity around the exact link between innovation and competition and innovation and IP rights. But the data shows that competition authorities might encourage and promote innovation by strategic, well-targeted action at the very least.[39]

But this doesn't rule out the possibility of subtleties at the interface between IP law and antitrust regulations. We find that there are particular bearings in the areas of mergers, compulsory trademark licencing, umbrella branding, interfaces and interoperability, grant-backs, patent pools, cross-licensing and licencing, and

various practices that expand patent monopoly beyond the limits of patent. The majority of these stem from unusual actions that are seldom seen in the wild when a company's market dominance is based on the possession of some other kind of unique asset.[40]

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