

Economics Paper

A History of Intellectual Property Protection and its Impacts on the Global Economy

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Introduction

In 1710, the Parliament of Great Britain passed the first known copyright law in the Western world, called the Statute of Anne. This statute is widely known as the first European copyright regulation, meaning the first government document which recognized the “legal right of Authorship” (Brainbridge, 2007). Although it provided no definition for ‘authorship’, was a tool for British censorship, and was repealed a hundred years later, this statute set a precedent for what we call Intellectual Property Rights (hereby referred to as IPRs) today. There have been countless regulations and laws regarding Intellectual Property since the Statute of Anne, such as the Patents Act in the United States, since 1790, and the Patent Act in Canada, since 1869. Yet, the most intriguing part of IPRs in the modern world is the way these laws contradict each other and work together on a global scale. Indeed, this non-physical type of right causes controversies and problems between countries constantly, which unstabilizes global peace and equity. Therefore, it is possible to hypothesize that these controversies have impacts on the international scale, mainly economic, social and technological. This paper will dive deep into the history and presence of IPRs in regards to their effect on foreign policies and how these problems are dealt with today, in the hopes to unveil the true impacts these IPRs have.

The Nature of Intellectual Property

Basic Definition

To understand International regulations and problems regarding Intellectual Property, it is essential to first understand its nature. According to the World Intellectual Property Organization’s website, IPRs are defined as “patents, copyrights and trademarks” protecting the “creations of the mind, such as inventions; literary and artistic works; designs; and symbols, names and images used in commerce” (World Intellectual Property Organization,

2021). Therefore, it is the protection of someone's ownership of ideas, models, and designs. These rights then relate to a plethora of different subjects, mainly economics, through global trade and monetary policies; politics, legislative and judicial policymaking; and technology, through the actual creative process that leads to the need for laws on Intellectual Property.

The Importance of Intellectual Property Rights

These types of laws and regulations are essential to our modern world. First of all, complete free distribution of any patent, design, and trademark would simply lead to a stagnation in creation and development, as the incentive to create and get recognition would no longer exist, caused by 'free riders', or people who would just steal ideas without paying (Stiglitz, 2008). Therefore, encouraging the development of new products stimulates the economy. Additionally, IPRs have been proven to accelerate the development and growth of Least Developed Countries (hereby cited LDCs)' economies and welfare (Maskus, 2000). Countries, to truly receive the full advantages of economic growth due to an increase in IPRs, would have to further open their markets and develop their technologies as well. Yet, it is still an important aspect of the growth of nations. IPRs are also one of the main solutions to the fight against over-globalization, as it enables organizations and governments to manage and control the effects of globalization, while not minimizing trade. However, John Stuart Mill, British philosopher and former Member of Parliament, would argue that these copyright and trademark laws actually harm the development of LDCs by restricting the freedom of expression and use of ideas, which in its turn limits the free flow of trade and capital (Hettinger, 1989, p.35). Nevertheless, IPRs have an effect on the Global Economy, good or bad, which will be explored further in this paper.

Intellectual Property Organizations and Treaties

Intellectual Property Treaties and Organizations are formal agreements or groups made between countries and nations that ratify some kind of cooperation surrounding IPRs, whether that be to set a standard for IPRs or to set other kinds of rules for International Trade in order to avoid the burden of cross-national IPR lawsuit cases.

The essential lesson in this section is that there are no International IPRs or laws. In fact, IPRs are solely territorial, which means that there isn't a single, global standard for laws surrounding Intellectual Property. The main problem with IPRs lies within the distinctions between a country's and another's approach to this right. Therefore, what Intellectual Property Treaties and Organizations try to achieve is to imitate a kind of "International Intellectual Property law" voluntarily, on a smaller scale. These create "two types of obligations" (Scotchmer, 2004, p.415), national treatment of foreign investors, and the harmonization of IPR protections, meaning that these treaties strengthen cooperation on IPR-related aspects through investment and unification. Additionally, organizations are often where these agreements originate from and are also essential to create a semi-standard for IPRs on the global scale. Hereby listed are some examples of current, working Intellectual Property protection Treaties and Organizations, which uphold these obligations.

Trade-Related Aspects of Intellectual Property Rights

First of all, and most known, is the Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement), a subsection of the World Trade Organization (WTO). These agreements put in place one of the world's first known minimum standards for cross-national copyright laws, through the formation of the WTO in 1995. Examples of what the TRIPS offered countries that were never really seen before, is the need for "formalities" in order to possess some form of copyright, such as copyright registration or notice. The TRIPS also

offers Intellectual Property laws-related dispute settlements through the WTO's dispute settlement body. On the other hand, the enforced formalities removed by the TRIPS helped relocate authors, and with their elimination came a wave of uncertainty regarding true authorship (Connolly & Valderrama, 2005). Another issue with the TRIPS is their inability to truly enforce IPR laws, and must therefore base itself on the participation and goodwill of the contributing nations.

World Intellectual Property Organization

Beyond the TRIPS agreements, the World Intellectual Property Organization (WIPO), one of the 15 specialized agencies of the United Nations, is also an organization dedicated to helping countries navigate the world of intellectual property protections and rules. Its mission is to, and I quote, “promote through international cooperation the creation, dissemination, use and protection of works of the human mind for the economic, cultural and social progress of all mankind” (WIPO, 2008). In other words, the WIPO desires to protect the authorship rights of developers while encouraging nations to work together towards better welfare for all. They do this by cooperating with other organizations, like the WTO, to establish a code of conduct regarding Intellectual Property protections on a global scale. They partake in and offer activities such as easy procedures to register for trademarks and, mainly, treaty administration..

The Patent Law Treaty

The Patent Law Treaty (PLT) is one of the many treaties focused on IP protection that are administered by the WIPO. It sets out to “harmonize and streamline formal procedures in respect of national and regional patent applications and patents and, thus, to make such procedures more user friendly” (WIPO, 2021), namely to facilitate the procedure of international patent recognition, not just national. A patent is a government license that

provides someone with the right or title of selling, making and/or using an invention. The PLT also reduces the application costs for such procedures, and offers electronic filing to keep the data easily accessible.

The Madrid Agreement and Protocol

The Madrid Agreement and Protocols are also part of what the WIPO offers, except it is for global protection systems, not just case-by-case.

The Madrid Agreement, concluded in 1891, is an agreement proposed in order to provide inexpensive trademarks registrations that apply in any member country, instead of having to file a registration for trademarks in each country separately. It differs itself from the PLT on the basis of trademarks instead of patents, which are symbols or words that represent companies or products, instead of on the basis of products themselves.

The Madrid protocol, developed in 1989, is simply the rules of conduct relating to the agreement of the same name. It was adopted to correct some deficiencies in the Agreement. Together, the Madrid Agreement and the Madrid Protocol form what is commonly called “The Madrid System” (Feliú, 2007).

The Impacts of Intellectual Property Protections

Innovative Impacts

Literature presents quite different interpretations of whether the protection of IPRs does spur technological change. In Kanwar & Evenson (2003), researchers argue that the contemporary debate around IPRs revolve around the degree by which they should be protected and enforced. It is thus unrealistic to yearn for IP rights not to be protected whatsoever since, as early as the 15th century, societies understood the importance of recognizing the rights of inventors. This is because offering protection to these inventors is

suggested to increase their innovative will. In Levin & al. (1987), it is argued that the protection of IPRs seems to be at the core of many companies' will to innovate. Companies will not want to innovate and progress if others can easily replicate their innovations. In a hypothetical situation, Company A can spend millions on research and development to invent a new product and, if IP laws were not enforced, Company B could imitate the produced innovation without ever having to invest capital in R&D. Assuring that IPRs are respected and enforced then creates an incentive for companies to innovate, knowing that the capital spent in R&D will eventually generate profit.

This may present a pessimistic view of humanity, as it may seem that Man only innovates, knowing that profit will eventually follow. Nietzsche would be in agreeance with such claims, as he argues that capitalism's State of Society has made Man inherently lazy, as he is no longer guided by passion, but rather by his materialistic fascinations with wealth and prestige. To then consider Economics a science, it is required that theory be built on this assumption, as assuming that humanity acts based on what provides most comfort then permits economists to predict and study the behaviour of these economic players.

Arguments in favour of the protection of IPRs are then based on this assumption, as, if companies are stripped of innovation's profitability, they will no longer be tempted to innovate. In a survey conducted by Mansfield (1986), it was discovered that 60% of pharmaceutical inventions would not have been developed in a world where intellectual property is not enforced. As such, being that Economics' primary objective is the improvement of aggregate welfare, it can be successfully argued that protection of IPRs is a step towards this objective.

In a different vein, the protection of IPRs also encourages innovation, as companies can no longer expect to work off the R&D of other corporations. As such, being that “Replication Companies” can no longer operate, they are obligated to shift their focus towards innovating themselves to compete with what other companies have to offer.

Corporations then develop an economic rivalry amongst each other, as they all are competing and innovating to attract the consumer to their product. For example, Apple is the owner of proprietary software in iPhones, which they call “IOS” (iPhone Operating System). Every year, they provide free updates to this software. They are essentially innovating to assure quality within their products and to continuously compete with Google’s operating system dubbed “Android”. Such advancements are then only made possible, as the intellectual property of both companies is being protected.

In a world where IPRs are not protected, Google can solely focus on the hardware of their phones and then install Apple’s IOS software without ever investing any capital in the R&D of software. And so, Apple will no longer have the incentive to innovate software, as other companies are benefiting from the capital they invest in R&D.

Thus, the innovative marvels that are irreversibly weaved within the contemporary world’s societal fabric can be attributed to the protection of IPRs, as this is what pushes companies to innovate for the sake of profit.

Increased Interventionism

Interventionism is a concept that opposes Adam Smith’s conception of a free market. Ludwig von Mises (1998) states that government intervention is “an isolated order by the authority in command of the social power apparatus; it forces the entrepreneur and the owner

of the means of production to use these means in a way different from what they would do under the pressure of the market.” As demonstrated in the previous chapter, the respect of IP laws first requires that IPRs be enforced by a legal entity, most usually State. The effect is almost paradoxical, as the interventionist laws themselves are restrictive, but, collectively, these restrictions produce a freeing of the market, as manufacturers feel no longer restricted by the opportunistic will of other corporations to profit from their innovations. As mentioned in the previous chapter, a corporation’s keenness to innovate is directly related to the profitability of such innovation. The absence of IP laws would then restrict these corporations, as this hindrance transforms their innovative ambition to velleity.

In *Wealth of Nations* (1776), Adam Smith argued that “every man, as long as he does not violate the laws of justice, is left perfectly free to pursue his own interest in his own way, and to bring both his industry and capital into competition with those of any other man.” Once more, this derogatory clause of *Justice* seems antithetical to the concept of liberty within the market, as laws are established and enforced by State. As such, governments may alter the law and render it restrictive to free market. Companies that replicate the innovations of others are then restricted by laws that protect intellectual property, as the government is constraining their economic activity.

The government, already exercising influence on different subdivisions of State, seems now to be gaining increasing control on the economic aspect of society. Minogue (2000) would argue that such interventionism is a step towards totalitarianism, as it “locks the individual within a single system of control.”

The economy may not be as self-regulating as Smith may have theorized since, repeatedly through this paper, it has been argued that IP regulation is necessary within the

context of global economics to assure that humanity's will to create and innovate be not befuddled. In Segerstrom (1991), researchers determined a positive correlation between the strengthening of IP laws and an increase in inventive intensity. It can then be argued that for a given economy to work at its full potential, it does require that State intervenes, to a certain degree, to ensure that economic players respect the "rules of the game", set by the State itself.

Effects on Developing Countries

Positive Impacts

In a study conducted by Kanwar (2012), the researcher found that the protection of IPRs is associated with greater technological transfer to developing countries, especially in terms of technological advancements in the means of production. As suggested by Scherer and Ross (1990), technology is currently predominantly possessed by multinational corporations. As such, developing countries can benefit from these corporations to improve their aggregate social welfare. According to Marx, one's means of production directly impact one's way of life. He argues that technology then determines humans, as it sets boundaries to what they may accomplish. Rendering these new technologies accessible to developing countries then improves their standard of life, as technology encourages increased production efficiency and, in consequence, lowers the price of produced goods.

Lee and Mansifield (1996) discovered that countries with non-stringent IP laws were perceived as non-desirable by multinational corporations, as they felt hesitant to transfer their proprietary technologies to countries where they may be easily copied.

Kanwar (2012) conducted a study that compared foreign investment in a variety of developing countries before and after the implementation of TRIPS. The research established that companies transferred an increase of over 3.2 billion dollars in capital to TRIPS

participating countries. And so, with the aid of TRIPS, multinational corporations no longer feared the transferring of technologies to developing countries, as they are at least certain that such technologies will not be replicated due to the IP laws set in place in such countries.

Negative Impacts

In a study conducted by Wekesa and Sihanya (2009), it was found that of the 50 or so patents granted in Kenya, between 0 and 5 were granted to local Kenyan organizations and individuals. The patents are then predominantly issued to foreign firms, most of which are pharmaceutical companies. When looking at viruses and diseases such as HIV & AIDS, Hoen and Passarelli (2013) state that increasing antiretroviral treatment in developing countries is not possible without low-cost medicines. In consequence, if multinational corporations protect the intellectual property of such treatments, they gain a monopoly of the market, as they can then set prices as high as they please. Generic pharmaceutical companies can then not replicate such treatments, as IP laws forbid them to do so.

In 1998, the South African government was sued by 39 multinational corporations over provisions in its Medicine Act which eased access to generic medicines, a concession that these corporations were not willing to make. The prices of antiretroviral treatment were much too high for individuals of these low-income countries to afford and thus was why, according to the AIDS Virus Education Research Trust, southern Africa was the region most impacted by HIV/AIDS. It is then for international legislators and politicians to find equilibrium between the protection of human rights and the protection of commercial interests.

Another issue that stems from the protection of IPRs is the loss of the developing world's sovereignty. As the stringent IP laws within developing nations attract the transfer of

foreign proprietary technologies, developing countries grow dependant on such multinational corporations. In a study conducted by Coombe (1998), it was argued that the protection of IPRs catalyzed “the increasingly transnational character of economic power, elite exploitation, indigenous political mobilization, flows of cultural information and genetic resources, [...] and assertions of cultural significance.” The effects of globalization are then amplified by the protection of IPRs, as developing countries have no other choice than to depend on the technologies of multinational corporations. The developing world is, in consequence, being imposed culture and being stripped of independence and, by extension, sovereignty. Minogue (2000) states that “without sovereign power the subject has no protection against the aggression of others.” As such, forcing countries to submit to foreign corporations then strips them of their independence and poses doubt on whether these countries are actually being weakened by IP protections rather than aided.

Environmental Impacts

Climate change, plastic pollution and deforestation are all examples of international environmental problems. Throughout the past decennies, we’ve seen many international organizations and treaties form around fixing these issues, such as the Paris Agreement in 2015, pushing countries to drastically lower their greenhouse gases emissions by 2100. There are also, as we’ve seen above, organizations and treaties dedicated to IP protection on the international scale. The two subjects can work together, but are often too distinct to do so, although both have the common theme of technology (Goeschl & Perino, 2016). For example, some scientists are on the path to create a better battery for electric cars, and others are engineering machines that will filter out garbage from the seas. Unfortunately, this is also where the environmental problems of IP protection emerge. The main issue is, similarly to

technological impacts, that any research or discovery surrounding climate change can't be shared indefinitely, therefore setting back progress as scientists are forced to discover the same things over and over again. Indeed, most companies that fund these scientists do not want the discoveries that they paid for to be free for anyone to build, use and sell. Therefore, they protect these designs through copyrights and patents, which makes these new discoveries/designs almost impossible to access. Companies can protect anything from software to engineering designs to climate change data. Therefore, they block valuable information and push back the fight against climate change. The privatization of environmental measures is wasting the little time and resources humans have left.

Thankfully, the United Nations Framework Convention on Climate Change (UNFCCC) has developed a partial solution to this problem. In their Agenda 21, they make references to technology and the impacts of IPRs. Ergo, this agenda requests easier access to and transfer of environmentally-friendly technologies, especially to developing countries (Brown, 2018). States are also encouraged to invest in the environmental sector to make these creations more publicly-owned. Although, not every signatory on this Agenda actually follows through with these regulations, since the rights of private entities collides with the “eco-responsibility” of countries and governments.

In conclusion, IP laws that protect environmental discoveries can have a major negative impact on durable development. Yet, laws, human rights and public funding can help the transfer of data and cooperation of entities against climate change.

Discussion

As the concept of authorship sparked the interest of Europeans in the 18th century, Intellectual Property has since been a contested topic within global economics. Many economists question what would be best for aggregate social welfare, although many agree

that offering no protection whatsoever brings very little benefit in both the short and long term. The importance societies grant to the protection of IPRs has then evolved through time, as it has been demonstrated throughout this paper. One trend that can then be observed would be that, as time progresses, it seems that IP laws have become increasingly stringent. Although technology has lifted a multitude of barriers in international trade, it has also created a panoply of issues never before seen in the world of Intellectual Property. International Organizations, such as the WTO, have then attempted to solve these issues, as not offering protection of Intellectual Property to corporations has repeatedly been correlated with a lack of innovation. As such, economic players in the world of intellectual property have to find equilibrium between the economic needs of corporations, and the right of humans to basic rights. Demonstrated in this paper would also be that offering too much protection in terms of intellectual property also threatens the sovereignty of developing countries, as they grow dependent on multinational corporations that consummate influence and power through the effects of globalization. Revisiting the research paper's original hypothesis, it is clear that intellectual property may be studied from a variety of different lenses, as it affects more than just economics itself. Having both social and technological impacts on society, it is crucial that these effects be weighed in when studying IPRs.

In terms of future research, economists should measure what they estimate equilibrium to be in the world of Intellectual Property. Balancing both the negative and the positive effects of IP, researchers should be able to present an international model of IP protection that would be most advantageous to humanity as a whole.

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