

2 The Justification for IPR Protection

“Intellectual property (IP)” refers to inventions, devices, new varieties of designs and other properties that are produced through “mental or creative labour” by human beings, and the law regulating intellectual property is “highly politicised.”¹ “Intellectual property rights (IPR)” is a catch-all term used to describe the legal status and protection that allows people to own intellectual properties – the intangible products of their creativity and innovation imbedded in physical objects – in the form that they own physical properties.² According to the official interpretation of World Intellectual Property Organisation (WIPO), IPR comprises those legal rights, by which the products of intellectual activity over a range of endeavours are defined.³ For the purposes of the TRIPs Agreement, IPR refers to copyright and related rights, trademarks, geographical indications, industrial designs, patents, integrated circuit layout-designs, protection of undisclosed information and anti-competitive practices in contractual licenses.⁴

The reasons for which protection is afforded to such rights are twofold. One is to give expression to the moral sentiment that a creator, such as a craftsman, should enjoy the fruits of their creativity; the second is to encourage the investment of skills, time, finance, and other resources into innovation in a way that is beneficial to society.⁵ This is usually achieved by granting creators certain time-limited rights to control the use made of those products.⁶

However, the tension between stimulating creation and disseminating its benefits to society at large is delicate.⁷ IPR as a concept has been discussed

¹ See L. Bently and B. Sherman, *Intellectual Property Law*, OUP (2001), at 1-2.

² *Ibid.*, at 2-3 (noting that intellectual properties “share a similar image of what means to ‘create’ (or produce),” for example a book, a design for a car, or a new type of pharmaceutical).

³ See “About Intellectual Property,” WIPO Online Information and Introduction, *available at* <<http://www.wipo.int/about-ip/en/>>.

⁴ See TRIPs Agreement Article 1(2).

⁵ See “WIPO Intellectual Property Handbook: Policy, Law and Use,” WIPO Publication No. 489, *available at*: <<http://www.wipo.org/about-ip/en/iprm/pdf/ch1.pdf>>.

⁶ *Ibid.*

⁷ See, e.g., Thomas Cottier, *Intellectual Property: Trade, Competition, and Sustainable Development*, University of Michigan Press (2003). See also, Philippe Cullet, *Intellectual Property and Sustainable Development*, New Delhi: Lexis/Nexis Butterworths (2005).

and debated throughout history and, with a global economy, this debate has become increasingly controversial and confrontational.⁸ This contention leads to a necessary justification regarding the international framework of IPR protection.

The way in which IPR is comprehended in any society is shaped by its legal, economic, political and cultural dimensions. Scholars from different backgrounds have often debated the validity and legitimacy of IPR from different perspectives.⁹ In this chapter, the author attempts to review IPR from its economic, legal and political perspective and justify the correlation between IPR and economic growth and transfer of technology, identify legal flexibility to implement international IPR standards, and examine the political implications of the existing IPR regime, particularly under TRIP Agreement.

2.1 Intellectual Property and Economic Growth – An Economic Analysis

In the context of economic analysis of law, a logic starting point of the justification for IPR protection seems to be to compare and contrast the components of such fundamental issues as intellectual property and economic growth.

Economic growth, in the sense attributed to this concept in contemporary macroeconomics, is a natural phenomenon of industrialisation.¹⁰ Economic growth depends, to large part, on technological change (*e.g.* innovation) and reflects the increase and accumulation of technological and other knowledge of commercial value.¹¹ From its early days, economic analysis has focus on issues concerning economic growth and its correlation with technological change, since these issues concern the human welfare in the long run.¹² As one

⁸ See Brigitte Binkert, “Why the Current Global Intellectual Property Framework under TRIPs is Not Working,” *Intellectual Property Law Bulletin* 143 (Spring 2006).

⁹ See Bently and Sherman, *supra* note 1, at 3.

¹⁰ The contemporary concept of economic growth has distant origins, since it stems back from the early days of the Industrial Revolution and is constantly evolving. In 1950s, following the publication of papers by Robert Solow and Nicholas Kaldor, growth theory became dominating topics until the early 1970s. The emerged “new growth theory” (also known as endogenous growth theory) asserts that new ideas are the root source of economic growth since they promote technological innovation and hence stimulate productivity improvements. For a substantive introduction, *see, e.g.*, Neri Salvadori, “Introduction”, 54 (2-3) *Metroeconomica*, 125–128 (2003); Michael Borras and Jay Stowsky, “Technology Policy and Economic Growth”, Berkeley Roundtable on the International Economy, Paper BRIEWP97, at 3; *see also*, Charles I. Jones, *Introduction to Economic Growth* (2nd ed.), W. W. Norton and Company, New York-London (2002).

¹¹ See Gene M. Grossman and Elhanan Helpman, “Endogenous Innovation in the Theory of Growth,” 8 (1) *The Journal of Economic Perspectives* 25-7 (1994).

¹² See Jones, *supra* note 10, at 3-16.

of the most popular fields in contemporary macroeconomics, economic growth is not only essential to theorists but also valuable to policy makers.¹³ In order to maintain economic growth, countries have endeavoured to establish varied mechanisms to foster innovation and facilitate the transfer of technology. The creation and protection of IPR exemplify a central part of this strategy.

While many scholars and policy-makers tend to allege that a strengthened IPR regime act as an important catalyst of economic growth,¹⁴ over the past years since the establishment of the global trading system, it still remains undecided as to whether and how the imposition of the Western-style IPR regime and its infrastructure would generate significant economic growth and progress as expected in the developing world. To identify and evaluate the real linkage of the two aspects in a global context is a rather difficult task. In this section, the author seeks to re-examine the correlation between IPR protection and economic growth as means to justify the validity and legitimacy of the existing international IPR system.

2.1.1 An Outlook on Theory of Economics and Law

The law does not exist in isolation. It is well recognised that problems with both a legal and economic dimensions often benefit from an understanding of both subjects. As Professor Posner has pointed out, economists have developed models which seem to provide an analytical framework for studying law, and although these are often based on “unrealistic” assumptions, these are a necessary component of the theory, since “[t]he true test of a theory is its utility in predicting or explaining reality and, judged by this criterion, economic theory, despite the unrealistic nature of its assumptions, may be judged a success.”¹⁵

Indeed, the two disciplines, law and economics, are interrelated. The purpose of law, according to the economic theory, is to alleviate market failures and thereby increase the efficiency of markets and produce a multitude of economic benefits to the society.¹⁶ The market failure paradigm has become the dominant terminology of policy analysts in their decision-making process, whereby an understanding of economics can highlight how laws may be applied to alter economic behaviour, and assess the effect they have had or may have on economic efficiency.¹⁷ Laws are expected to attain this purpose by

¹³ *Ibid.*

¹⁴ Steven P. Reynolds, “Antitrust and Patent Licensing: Cycles of Enforcement and Current Policy,” 37 *Jurimetrics J.* 138 (1997).

¹⁵ See Richard Posner, *Economic Analysis of Law* (1977).

¹⁶ Sidney A Shapiro, “Keeping the Baby and Throwing out the Bathwater: Justice Breyer’s Critique of Regulation,” 8 *Admin. L.J. Am. U.* 725 (1995).

¹⁷ *Ibid.*

forbidding certain actions or by altering the balance of incentives so that people act in one way instead of another.¹⁸ Laws can also be used, intentionally or not, to facilitate or hamper participation of transactions.¹⁹

The law and economics movement began in the 1960s with economists such as Ronald Coase and Guido Calabresi,²⁰ and later Richard Posner.²¹ Ronald Coase and Guido Calabresi are generally identified as the starting point for the modern school of law and economics.²² In 1973, Posner published his landmark work, *Economic Analysis of Law*,²³ and brought this groundbreaking topic to the attention of the general legal academy.²⁴ Posner's book received wide acclaim amongst legal academia and was considered to be the "bible of the law and economics movement."²⁵

2.1.2 IPR: Incentive for Innovation?

In an information age, few people would deny the significance of creativity, inventions and innovation to economic growth and technological development. Over the past two centuries or so, the acceleration of technological advancement has radically changed the life of mankind and demonstrated values of innovation in creating our everyday reality. The perpetual exponential advance of technology has rendered increasingly visible the intellectual content to innovation at a time when the globalisation of world markets creates global opportunities for the products of innovation. In a knowledge-driven economy, the effective protection of IPR is emerging as a critical element of commercial success.²⁶ With increasing levels of international trade, the amount of trade involving IPR also increases, causing significant resources to be devoted to effective protection.

¹⁸ See Posner, *Economic Analysis of Law*, at 10-13.

¹⁹ *Ibid.*

²⁰ In 1961, Coase and Calabresi, independently from each other, published their groundbreaking articles in the interacting area of law and economics, which has had significant impact towards legal thinking. See Ronald Coase, "The Problem of Social Cost," 3 *J. L. Econ.* No.1 (1960); see also Guido Calabresi, "Some Thoughts on Risk Distribution and the Law of Torts," 70 *Yale L. J.* (1961).

²¹ *Ibid.*

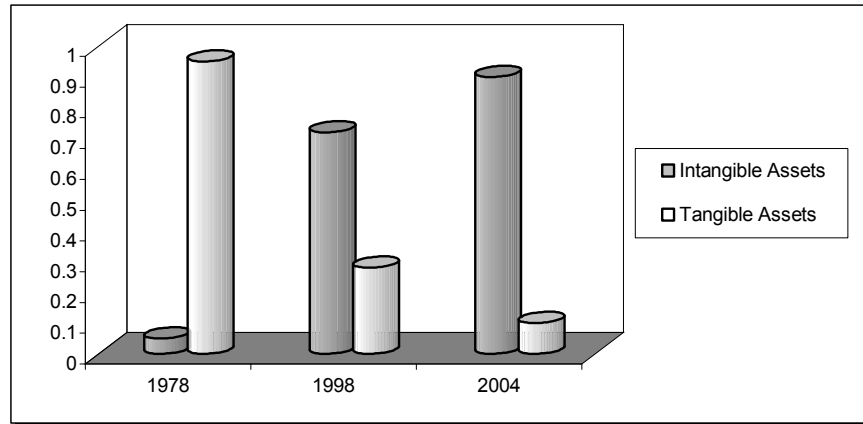
²² See Posner, *the Economics of Justice* 4 (1983).

²³ See Posner, *Economic Analysis of Law*, *supra* note 15.

²⁴ See Lewis Kornhauser, "The Economic Analysis of Law," *The Stanford Encyclopedia of Philosophy*, Edward N. Zalta (ed.) (2007), available at <<http://plato.stanford.edu/archives/fall2007/entries/legal-econanalysis/>>.

²⁵ Nan Aron, *et al*, "Economics, Academia, and Corporate Money in America: The 'Law and Economics Movement,'" 24 *Antitrust Law and Economics Review* (1994).

²⁶ Grossman and Helpman, *supra* note 11, at 25-7.



Source from Value Based Management, at <http://www.valuebasedmanagement.net/faq_importance_intangible_assets.html>, chart designed by the author

Figure 1 Relative Significant of Intangible Assets Compared to Tangible Peers in Business

As a consequence of significant economic growth and explosive technological development, world trade now has more knowledgeable and technological content than ever before. The importance of IPR for trade has gained more significance as the share of knowledge-based or high-tech products in total world trade has doubled between 1980 and 1994 from twelve percent to twenty-four percent.²⁷ As shown in the Figure 1 above, the percentage of intangible assets was increased from five percent in 1978 to seventy-two percent in 1998. Another eighteen percent was gained in the following six years. The intellectual assets have become major value drivers in our modern economic world.

A case to point is the United States. According to Professor Juan Enriquez, the leading authority on the economic and political impacts of the life sciences, the United States generates the most patents per capita.²⁸ As shown in Table 1 below, it takes about 3,000 Americans to generate one U.S. patent, compared to 4,000 Japanese, 6,000 Taiwanese, 1.8 million Brazilians, 10 million Chinese and 21 million Indonesians.²⁹ IPR has been carefully refined over many years to meet the challenges of countries as it developed an industrial base and post-industrial service economies. With ever increasing levels of international trade, the question arises as to whether IPR as it has evolved will

²⁷ See UN Comtrade Database, available at <https://unp.un.org/special_comtrade.aspx>.

²⁸ Bruce P. Mehlman, "The Changing Wealth of Nations: Intellectual Property in the Age of Innovation," Licensing Executives Society Spring Meeting, United States Department of Commerce, May 3, 2002, Washington, DC, available at <www.technology.gov/Speeches/p_BPM_020503_Wealth.htm>, last visited October 16, 2006.

²⁹ *Ibid.*

be up to the challenge of levelling the per capita levels of innovation between the developed and developing world or whether they will merely reinforce the existing levels of difference.

Table 1 Patents Per Capita/U.S.

Nations	Population/per patent
The United State	3,000
Japan	4,000
Taiwan	6,000
Brazil	1,800,000
China	10,000,000
Indonesia	21,000,000

Sources from Professor Juan Enriquez, available at <http://www.technology.gov/Speeches/p_BPM_020503_Wealth.htm>

The illustration and interpretation of the economic rationale and function of IPR as a necessary policy-making instrument that stimulates innovations might seem abstruse and obscure. As a matter of conceptual design, IPR legislation confers on the holder of the right an exclusive “monopoly” for a limited period of time.³⁰ This will enable them to control the commercial exploitation by setting the level of revenue arising from their use and safeguarding it by excluding others from making, selling, or using it.³¹ Ensuring that social benefit derived from knowledge-based innovation outweighs the social cost is at the core of balancing the factors to be considered. However, in high technology sectors such as pharmaceuticals, the risk of failure of expensive research to bear fruit is high and entrepreneurs must have good reason to expect that the cost of failure can be recaptured from the profits of future success. Otherwise there is little incentive to undertake innovative activities.

Another aspect is whether an IPR regime is the appropriate vehicle for stimulating enabling, rather than applied, technologies, or whether industry-funded Research & Development (R&D), government-funded awards, or the public sector are more effective vectors.³² IPR is important to us since the de-

³⁰ See W. R. Cornish, *Intellectual Property: Patents, Copyright, Trade Marks and Allied Rights*, London, Sweet and Maxwell 38 (1999).

³¹ *Ibid.*

³² Randall Kroszner, “Economic Organization and Competition Policy,” 19 *Yale Journal on Regulation*, 541-97 (2002)(arguing that, “on the one hand, it is impossible for IPR regime to provide profound protection without exception. On the other hand, some innovation may be too difficult to imitate that, even without IPR protection, the innovator can enjoy a substantial cost or quality advantage over its competitors for some period. In either case, other characteristics of some dynamically competitive industries are important in making it likely that a successful innovation will yield a firm the leading position in a market, and profits that are essential to encourage such innovation”).

cision to grant property rights in intangibles impinges on both competitors and the public.³³ As noted by Nancy Gallini and Suzanne Scotchmer, “if the balance between private gain and public good slips too far beyond what is necessary to spur innovation, it will instead become a drag on innovation and impede creating further innovations.”³⁴

How the right balance is achieved and whether the same balance is capable of universal adoption has engaged much academic debate. Ishac Diwan and Dani Rodrik, on one hand, conclude that developing nations may embark on protecting IPR of developed nations to facilitate the invention of technologies that are indigenously appropriate to the developing world.³⁵ Josh Lerner has taken a different approach to the analysis of the impact of patent reform by “examining the impact of major patent policy shifts in 60 nations over the last 150 years that enhanced the amount of patent protection provided,” using a “differences-in-differences analysis.”³⁶

On the other hand, recent economic analysis offers somewhat a different interpretation from the traditional views. Judith Chin and Gene Grossman analysed a ‘static’ model of symmetric duopoly whereby all innovation takes place in developed nations and all imitation takes place in developing nations and discovered that developing nations have little incentive to agree to positive IPR protection because their competitive position in the output market would be weakened after paying a higher wage.³⁷ Similarly, Alan Deardorff designs another static model and indicates that the welfare effect of worldwide patent coverage could have an “offsetting effect,” in the event that “all innovation originates in one part of the world,” since “on one hand, permitting inventors to earn monopoly profits on their inventions and thus stimulating inventive activity and, on the other hand, distorting consumer choice by monopoly

³³ Bently and Sherman, *supra* note 1, at 4.

³⁴ See Nancy Gallini and Suzanne Scotchmer, “Intellectual Property: When Is It the Best Incentive System?” *UC Berkeley Department of Economics Working Paper* (2001).

³⁵ See Ishac Diwan and Dani Rodrik, “Patents, Appropriate Technology, and North-South Trade,” 30 *J. Int’l Econ.*, at 27-47 (1991).

³⁶ See Josh Lerner, “Patent Protection and Innovation Over 150 Years,” *NBER Working Papers* 8977, National Bureau of Economic Research, Inc (2002).

³⁷ Judith Chin and Gene Grossman, “Intellectual Property Rights and North-South Trade,” 1988 *NBER Working Paper*, No.2769, available at: <<http://www.nber.org>>, last visited March 29, 2006 (the authors show in their model that there are certain circumstances where a less-developed country may be better off with weak IPR protection. In their model, a Northern firm and a Southern firm have divergent access to patent protection and produce a same good in a same market. In the first instance, the Southern firm can benefit from weak protection of IPR; however, after achieving a high global share of production output and gaining adequate technological advance, the protection of IPR becomes authentic).

pricing.”³⁸ He subsequently suggests that there may be geographical limitation on the coverage of patents as to how far IPR should be extended internationally.³⁹

Elhanan Helpman applies a more intrinsic approach to examining the benefits and costs of stronger IPR enforcement in a general equilibrium model where innovation originates in the developed world while the developing world relies upon the imitation of the innovation produced by the former.⁴⁰ Helpman advocates incremental improvement of IPR standards and demonstrates in his model that it is feasible for the innovation of developed nations to slow down the speed of the unification process of the IPR protection in the developing world lest the stricter IPR protection may ultimately hurt both developed and developing nations.⁴¹ He concludes that, in general, the developing world has little to gain from higher IPR protection due to the terms of trade deterioration from an initial position of equilibrium.⁴² Similarly, Stephen Richardson and James Gaisford also argue that in a country where knowledge gap is significant and domestic invention is scarce, a heightened protection of IPR could impair the overall welfare of that country and result in the reduced world welfare.⁴³

In a similar vein, Gene Grossman and Edwin Lai show in their findings that the impact of strengthened IPR abroad does not necessarily have a strong positive impact on global innovation.⁴⁴ Edwin Lai and Larry Qiu established a model with two regions in the world – the developed and developing world, “which trade two types of goods, new products and traditional products.”⁴⁵ They find that developed and developing nations have differentiated capability to innovate.⁴⁶ These studies find that the strengthening of IPR yields no proportional stimulating effects on endogenous innovation.

³⁸ A. V. Deardorff, “Welfare Effects of Global Patent Protection,” 59 (233) *Economica* 49(1992)(demonstrating the “offsetting effects” of the patent protection and their implications for the less-advanced countries).

³⁹ *Ibid.*, at 35-6.

⁴⁰ Elhanan Helpman, “Innovation, Imitation, and Intellectual Property Rights,” 61(6) *Econometrica* 1247-1280 (1993), also available at <www.nber.org/papers/w4081.pdf>.

⁴¹ *Ibid.*

⁴² *Ibid.*

⁴³ See, e.g., Stephen Richardson and James Gaisford, “North-South Disputes over the Protection of Intellectual Property,” 29 *Canadian J. Econ.* (Special Issue, April) 376-381 (1996). See also James Gaisford and Stephen Richardson, “The Trips Disagreement: Should GATT Traditions Have Been Abandoned,” 1 (2) *Estey Centre Journal of International Law and Trade Policy* 137-69 (2000).

⁴⁴ See Gene Grossman and Edwin Lai, “International Protection of Intellectual Property,” *NBER Working Papers* 8704 (2002), National Bureau of Economic Research, Inc. Available at <http://www.nber.org/papers/w8704.pdf>, last visited 19 March 2003.

⁴⁵ See Edwin Lai and Larry Qiu, “the North’s Intellectual Property Rights Standard for the South?” 59(1) *J. Int’l Econ.* 183-209 (2003).

⁴⁶ *Ibid.*

Some scholars go even further. In a paper concerning technological change, Michele Boldrin and David Levine argue that “while awarding a monopoly to an innovator increases the payoff to the original innovator, by giving her control over subsequent uses of the innovation, it reduces the incentive for future innovation.”⁴⁷ They stress that “[f]rom the perspective of the functioning of markets, [...] what is ordinarily referred to as ‘intellectual property’ protects not the ownership of copies of ideas, but rather a monopoly over how other people make use of their copies of an idea.”⁴⁸ As noted by Boldrin and Levine, “economic theory shows that perfectly competitive markets are entirely capable of rewarding (and thereby stimulating) innovation, making copyrights and patents superfluous and wasteful.”⁴⁹ The paper concludes that, in light of social welfare, current legislation on intellectual property plays a thoroughly pernicious role in the innovation process.⁵⁰ Apparently, this paper has attempted to challenge the conventional wisdom and evoked an enormous response.⁵¹

The most recent contribution in this area is the book *the Economic Structure of Intellectual Property Law* contributed by William Landes and Richard Posner.⁵² By identifying and testing the interaction patterns of intellectual property law and economics, Landes and Posner argue that “expanding IPR can actually reduce the amount of new IPR that is created by raising the creators input costs, since a major input into new intellectual property is existing such property.”⁵³ The key insight of their economic approach is to demon-

⁴⁷ See Michele Boldrin and David K. Levine, “Perfectly Competitive Innovation,” Working Paper Archive from *UCLA Department of Economics* (2003), SSCNET, UCLA, available at <<http://levine.sscnet.ucla.edu/papers/pci23.pdf>>, at 4.

⁴⁸ See Lewis Kornhauser, “The Economics of Ideas and Intellectual property,” available at <<http://levine.sscnet.ucla.edu/papers/pnas18.pdf>>, at 1.

⁴⁹ Douglas Clement, “Creation Myths: Does Innovation Require Intellectual Property Rights?” Reason Online, March 2003, available at <<http://www.reason.com/news/show/28703.html>> (quoting Boldrin and Levine, “Perfectly Competitive Innovation”, *ibid*).

⁵⁰ Boldrin and Levine, “Perfectly Competitive Innovation,” *supra* note 47, at 1.

⁵¹ Commentators have given this paper a mixed reception. Robert Solow, the 1987 Nobel Prize laureate for his work on growth theory, highly praised this paper as “an eye-opener”; in a working paper entitled “24/7 Competitive Innovation”, Danny Quah of the London School of Economics calls the Boldrin-Levine analysis “an important and profound development” that “seeks to overturn nearly half a century of formal economic thinking on intellectual property.” By contrast, the negative responses include Benjamin Klein, a UCLA economist, who criticises their analysis “unrealistic” and Paul Romer, a Stanford economist, who considers their logic flawed and their assumptions implausible. See Douglas Clement, “Creation Myths”, *supra* note 49; see also David Warsh, “The Case against Intellectual Property,” *Economic Principals*, July 21, 2002, available at <www.economicprincipals.com/issues/02.07.21.html>.

⁵² William Landes and Richard Posner, *The Economic Structure of Intellectual Property Law*, Belknap Press of Harvard University Press (2003).

⁵³ *Ibid*, at 422.

strate that overprotection of IPR undermines the traditional balance between right proprietors and society. Paradoxically, over-extended protection of IPR may have a counteraction effect to the innovation.⁵⁴

Apparently, while IPR plays an important role in knowledge-oriented world economies and acts as an irreplaceable factor behind the incentives as a burst in innovation, like many things that cannot make the best of both worlds, IPR has merits and faults. Apart from the virtue to stimulate the innovation, the obvious defect is the “deadweight loss due to monopoly pricing.”⁵⁵ IPR can either trigger or thwart innovation; it can either promote or hinder economic growth, depending on how it is oriented in the application. As noted by Nancy Gallini and Suzanne Scotchmer, in terms of the protection duration, if the sole concern is to encourage innovation, the IPR should not be terminated; if the sole concern is to avoid deadweight loss that occurs through proprietary prices, the IPR should not exist at all from its inception.⁵⁶ The main regulator is the duration of protection balancing these two concerns.

2.1.3 IPR: Stimulator of Trade Flow?

Apart from encouraging the innovation required for economic growth, IPR is also designed to contribute to the public benefit by ensuring effective short-term dissemination and long-term assimilation of technology.⁵⁷ Whilst this may be conventional wisdom in a domestic setting, the worldwide impact of IPR has so far been largely unexamined in spite of what is at stake in terms of trade, investment and transfer of technology. Recent studies have been somewhat inconclusive and acrimonious. In the area of bilateral trade, Keith Maskus and Mohan Penubarti attempted to set up a linkage between IPR protection and imports, and reiterated that stronger patent rights in developing countries would significantly increase imports from developed countries and, in some circumstances, some other developing countries as well.⁵⁸ Primo Braga and Carsten Fink in 2000⁵⁹ and Pamela Smith in 2001 carried on this project,

⁵⁴ See Daniel Levine, '05, *Profiles: The Economic Structure of Intellectual Property Law*, available at <<http://www.law.uchicago.edu/alumni/record/landes-posner-book.html>>.

⁵⁵ Nancy Gallini and Suzanne Scotchmer, “Intellectual Property: When Is It the Best Incentive System?” Institute of Business and Economic Research, Department of Economics, UCB, Paper E01-303 (2001).

⁵⁶ *Ibid.*

⁵⁷ According to Article 7 of TRIPs Agreement, protection and enforcement of IPR “should contribute to the transfer and dissemination of technology”. See TRIPs Agreement, Article 7.

⁵⁸ K. Maskus & M. Penubarti, “How Trade-Related Are Intellectual Property Rights?” 39 *J. Int'l Econ.*, 227-48 (1997).

⁵⁹ See Primo Braga and Carsten Fink, “Intellectual Property Rights and Economic Development,” *World Bank Background Paper*, available at <http://www1.worldbank.org/wbiep/trade/papers_2000/bpipr.pdf>.

devoting their research effort to the interaction of market size and the strength of the IPR regime and yielded similar results that are convergent and coherent with conventional theories.⁶⁰

Nevertheless, as Maskus has clarified, some imports are attributed to technology transfer; however, strengthening IPR tends to increase imports of low technology consumer items, leading to the decline of indigenous industries based on imitation.⁶¹ This implies that countries with limited technological capacity may experience reduced imports since intellectual property laws have the effect of increasing overall import prices and thus restricting import capacity.⁶²

The main argument is that, whether or not there is full interaction between stronger IPR protection and higher lever technology transfer remains untested. More and more evidence shows that there is no strong positive correlation between IPR protection and foreign trade. A case in point is China. China, with weak IPR protection, has continued to enjoy rapid trade growth for many years and has still maintained a strong momentum of growth.⁶³ According to the International Trade Statistics 2003 released by the WTO, China was the fourth-largest merchandise trader in 2002, if the European Union is counted as a single unit.⁶⁴ In the 1990s, China's trade growth was three times that of global trade and, between 2000 and 2002, the value of exports and imports rose by thirty percent while world trade stagnated.⁶⁵

Another case in point is Microsoft. Microsoft is undoubtedly the biggest victim of the weak copyright protection in its Chinese market. However, as Bill Gates revealed, Microsoft needs piracy to occupy the market and consolidate its position.⁶⁶ Clearly, Microsoft understands the two significant features of software. One is its zero marginal cost, thus using piracy to open up the market does not cause much loss; the other is its "locking effect," by which users of pirated software are easy to get "addicted." As Bill Gates noted with foresight, "[a]lthough about 3 million computers get sold every year in China,

⁶⁰ Pamela Smith, "How Do Foreign Patent Rights Affect U.S. Exports, Affiliate Sales, and Licenses?" 55 (2) *J. of Int'l Econ.* 411-439 (2001).

⁶¹ K. Maskus, "Intellectual Property Rights in the Global Economy," *Institute for International Economics* 113 (2001).

⁶² "Integrating Intellectual Property Rights and Development Policy," Report of the Commission on Intellectual Property Rights (CIPR, UK), September 2002, available at <www.iprcommission.org/graphic/documents/final_report.htm>, last accessed February 18, 2008.

⁶³ China's foreign trade grew 15 percent in 2005, and China has set a foreign trade growth target of 10 percent from 2006 to 2010. See, "China Sets Foreign Trade Growth Target for Next Five Years," *People's Daily Online*, October 11, 2006, available at <http://english.people.com.cn/200610/11/eng20061011_310896.html>.

⁶⁴ See "International Trade Statistics 2003," WTO, available at <www.wto.org/english/res_e/statistics/its2003_e/its2003_e.pdf>, last visited March 23, 2005.

⁶⁵ *Ibid.*

⁶⁶ Gao Xing, "Microsoft is Taking Action," *China Youth Daily*, May 31, 1999 (14).

but people don't pay for the software [...]. Someday they will, though. As long as they are going to steal it, we want them to steal ours. They'll get sort of addicted, and then we'll somehow figure out how to collect sometime in the next decade.”⁶⁷ Gates's forethoughtful perspective on Microsoft's willingness to bear millions of dollars of losses to Chinese piracy implied of his firm confidence that Microsoft will eventually receive huge returns despite today's lax protection.⁶⁸

2.1.4 IPR: Engine of Technology Transfer?

There remains a divergence of opinion on IPR and transfer of technology between developed and developing countries. This controversy is characterised by the premise that developing countries go for the TRIPs standards in order to attract Foreign Direct Investment (FDI) necessary for development.⁶⁹ However, the huge administrative costs and policy burden in implementing TRIPs provisions serve to counterbalance the motivations and endeavours of developing countries.⁷⁰

Normatively, TRIPs supporters, usually the policy-makers from the developed countries, assert that a uniform set of relatively high standards of protection facilitates the security required by FDI, and thereby encourages a more rapid and effective transfer of technology.⁷¹ From this viewpoint, strong domestic IPR rules are essential to the technological development.⁷² By contrast, developing nations consider their acceptance of TRIPs conditional on economic rewards including acquisition of advanced technology. As noted by Laurence Helfer, developing countries see the TRIPs as part of a WTO “package deal” in which they are privileged to receive freer access to the markets of industrialised nations in exchange for their willingness to afford protection to foreign countries.⁷³ However, “with implementation proving increasingly slow, costly, and a source of domestic opposition, TRIPs had begun to look increasingly problematic for many developing countries.”⁷⁴

⁶⁷ Corey Grice & Sandeep Junnarkar, “Gates, Buffett A Bit Bearish”, *CNET*, July 2, 1998.

⁶⁸ See Yahong Li, “The Wolf Has Come: Are China's Intellectual Property Industries Prepared for the WTO?” 20 *UCLA Pacific Basin L. J.* (2002), at 80.

⁶⁹ Warren Newberry, “Copyright Reform in China: A ‘TRIPs’ Much Shorter and Less Strange Than Imagined?” 35 *Conn. L. Rev.* 1448, 1449 (2003)(contesting that “[t]his controversy [about the technology transfer and IPR protection] goes to the heart of the TRIPs Agreement”).

⁷⁰ *Ibid.*

⁷¹ Laurence R. Helfer, “Regime Shifting: The TRIPs Agreement and New Dynamic of International Intellectual property Lawmaking,” 29 *Yale J. Int'l L.* (2004), at 2.

⁷² *Ibid.*

⁷³ *Ibid.*

⁷⁴ *Ibid.*, at 70.

Scholarly literature to date concerning the transfer of technology and IPR is also controversial. One epistemological stance insists that stronger IPR protection gradually but surely benefits developing countries by stimulating more FDI and transfers of technology, “ensuring a relatively equal distribution of gains.”⁷⁵

Another influential research finding can be found from a series of discussion papers of the International Finance Corporation (IFC).⁷⁶ As an affiliate of the World Bank, the IFC aims to promote the economic development of its member countries through investment in the private sector.⁷⁷ An IFC discussion paper entitled “IPR Protection, Foreign Direct Investment, and Technology Transfer” (IFC Discussion Paper Number 19) was released in 1994.⁷⁸ As a continuation of the above analyses, one year later, another discussion paper, entitled “Intellectual Property Protection, Direct Investment, and Technology Transfer: Germany, Japan, and the United States” (IFC Discussion Paper Number 27) was released.⁷⁹ By analysing a survey of major global corporations in Germany, Japan, and the United States on the importance they attach to IPR protection in making FDI and IPR decisions, this report concludes that, “in certain relatively high-technology industries like chemicals, pharmaceuticals, machinery, and electrical equipment, a country’s system of IPR protection often has a significant effect on the amount and kinds of technology transfer and direct investment [...]. Also, when a variety of relevant factors are held constant in an econometric model, the effects of such protection on U.S. direct foreign investment are substantial and statistically significant.”⁸⁰

Edwin Mansfield, the author of the IFC Discussion Papers, used an econometric approach in its empirical analysis. Firms of Japanese, German and United States domicile were asked whether the protection of IPR in selected countries was too weak to risk licensing its newest or most effective technology to unrelated firms in that country.⁸¹ As shown in Table 3 below, in the chemical and pharmaceutical industries, over forty percent of the firms felt that protection in India, Thailand, and Argentina was too weak to consider li-

⁷⁵ Lee G. Branstetter *et al.*, “Do Stronger Intellectual Property Rights Increase International Technology Transfer?” Empirical Evidence from U.S. Firm-Level Panel Data, *NBER Working Paper*, July 2005, available at <www.people.hbs.edu/ffoley/IPRReform.pdf>.

⁷⁶ See e.g., Edwin Mansfield, “Intellectual Property Protection, Foreign Direct Investment, and Technology Transfer,” *IFC Discussion Papers*, No 19, available at <http://www.ifc.org>, last visited August 29, 2006; see also Michael W Nicholson, “Intellectual Property Rights, Internalization and Technology Transfer,” available at <http://www.ftc.gov/be/workpapers/wp250.pdf>, last visited August 29, 2006.

⁷⁷ See “Mission of IFC,” available at <www.ifc.org/ifcext/about.nsf/Cotent/Mission>.

⁷⁸ See Edwin Mansfield, *supra* note 76.

⁷⁹ Edwin Mansfield, “Intellectual Property Protection, Foreign Direct Investment, and Technology Transfer,” *IFC Discussion Paper* No. 27.

⁸⁰ *Ibid.*

⁸¹ *Ibid.*

censing; by comparison, Singapore and Hong Kong received the highest grading (the numbers varying from 0 to 100 illustrate their attitudes towards risks in the transfer of technology in these countries).⁸² In the chemical and pharmaceutical industries, U.S. firms seem to have a heightened sense of risk compared with Japanese firms, a fact that may reflect the U.S. being a leader, and having a strong comparative advantage in the chemical and pharmaceutical industries. The result of the model shows that strength or weakness of IPR protection has an important effect on some, but not all, kinds of transfer of technology.⁸³

Table 2 Percentage of Selected Firms & Their Attitude towards IPR (Chemicals & Drugs)

Host Country	Germany	Japan	U.S.
Argentina	57	44	62
Brazil	43	36	69
Chile	33	55	47
Hong Kong	14	7	33
India	100	85	81
Philippines	43	38	47
Singapore	0	0	25
Korea	33	7	38
Taiwan	33	21	44
Thailand	57	50	73

Sources: Edwin Mansfield, "Intellectual Property Protection, Foreign Direct Investment and Technology Transfer," IFC Discussion Papers No. 19 & 27.

In 2000, Guifang Yang and Keith Maskus worked jointly to examine the correlation between the strength of the IPR protection and the effect of the extent of the high-quality licensing.⁸⁴ In 2003, Yang and Maskus continued their research and released their new findings in the form of the World Bank Policy Research Working Paper.⁸⁵ Their research findings show that stronger IPR in the developing world would increase the extent of high-quality licensing from the developed world to the developing world under a particular condition.⁸⁶ As Yang and Maskus explain, "[i]t is more optimistic about the impact of the TRIPs agreement than were the findings of prior literature" that "stronger

⁸² *Ibid.*

⁸³ *Ibid.*

⁸⁴ See Guifang Yang and Keith Maskus, "Intellectual Property Rights, Licensing, and Innovation in an Endogenous Product Cycle Model," 53 *J. Int'l Econ.* 169-187 (2000).

⁸⁵ See Guifang Yang and Keith Maskus, "Intellectual Property Rights, Licensing, and Innovation," World Bank Policy Research Working Paper 2973, February 2003, available at <www.worldbank.org/research/trade/archive.html>.

⁸⁶ Guifang Yang and Keith Maskus, "Intellectual Property Rights, Licensing, and Innovation," *ibid.*, at 37.

global protection of the fruits of R&D should encourage innovation” and facilitate transfer of technology.⁸⁷

An NBER Working Paper co-authored by Lee Branstetter, Raymond Fisman, and Fritz Foley identified evidence that the existing international IPR regime seemed to increase the flow of royalty payments from affiliates to their parents.⁸⁸ This is more to do with transfer pricing and using royalties as a tax deductible form of dividend – this is particularly so in states where there are requirements for corporations to have local participation in ownership.⁸⁹ “An increase in the magnitude of licensing payments reflects either an increase in the price of ongoing technology flows or the importation of advanced technologies in the post-reform period.”⁹⁰ Branstetter and Fisman’s analytical examination of international patent filings confirms that “some component of the increased licensing revenue flows represents the introduction of advanced technology” and supports the belief that “improvements in IPR result in real increases in technology transfer within multinational enterprises.”⁹¹

On the other side, however, opponents such as Abbott and Cottler, maintain that stronger IPR protection counteract the public interest by transferring royalties to multinational corporations headquartered in a few super economies and thus of benefit only to those in which such corporations are domiciled notably the United States, the EU and Japan.⁹²

The Report of the Commission on IPR also presents a different point of view.⁹³ It suggests that “the determinants of effective technology transfer are many and various,” and the “[a]bility of countries to absorb knowledge from elsewhere and then adapt it for their own purposes is of crucial importance.”⁹⁴ For this a country requires the enhancement of local capacity building through promoting efficient educational programmes, facilitating active R&D strategies, and developing appropriate institutions “without which even technology transfer on the most advantageous terms is unlikely to succeed.”⁹⁵

⁸⁷ *Ibid*, at 5.

⁸⁸ Lee G. Branstetter *et al*, “Do Stronger Intellectual Property Rights Increase International Technology Transfer?” Empirical Evidence from U.S. Firm-Level Panel Data, *NBER Working Paper*, November 2002.

⁸⁹ *Ibid*, at 2.

⁹⁰ *Ibid*.

⁹¹ *Ibid*; see also Lee G. Branstetter *et al*, “Do Stronger Intellectual Property Rights Increase International Technology Transfer?” Empirical Evidence from U.S. Firm-Level Panel Data, *NBER Working Paper*, July 2005, at 4.

⁹² F. Abbott, T. Cottler and Francis Gurry, *The International Intellectual Property System*, The Hague: Kluwer (1999) at 909, 913 (stating that intellectual property is a crucial factor of wealth since the entire evolution of modern technologies has been framed by intellectual property laws).

⁹³ “Integrating Intellectual Property Rights and Development Policy,” *supra* note 62.

⁹⁴ *Ibid*, at 28.

⁹⁵ *Ibid*.

As concluded by the Intellectual Property Report, “for those developing countries that have acquired significant technological and innovative capabilities, there has generally been an association with ‘weak’ rather than ‘strong’ forms of IPR protection in the formative period of their economic development.”⁹⁶ The analysis above suggests that IPR protection has no direct influence on the promotion of technology transfer during formative stages of development, where IPR reform met with resistance due to its high economic cost.⁹⁷

Growing evidence tends to prove that there is no causality between IPR and FDI.⁹⁸ The case in point is China which has one of the highest piracy rates in the world, yet is still attracting substantial FDI and the transfer of technology.⁹⁹ According to a survey conducted among foreign businessmen in China, the size and potential of the market act as the determining factors that induce FDI and the transfer of technology.¹⁰⁰

The understandings and interpretation of the role of IPR concerning the transfer of technology not only differ among commentators and scholars, but also differ over time. Indeed, theoretically, it is still the predominant discourse that IPR is the necessary appurtenants to the commercialisation of innovative products and that this is the necessary engine of growth in most high technology industries. It is also true that the effective protection of IPR tends to be a fundamental requirement in the ability of domestic industries contributing to economic growth, and an improved IPR protection acts as a potential catalyst for further economic development in a long run. However, in a global context, the fundamental questions as to how IPR stimulate creation and commercialisation of new knowledge, and how it can make the best contribution to the innovation required by varied domestic socio-economic environments remains unclear and calls for further studies.

2.1.5 The Optimal Level of Protection

The design of IPR has evolved quietly during the past centuries in a manner that has emphasised the value of ideas and knowledge. It is indeed inconceiv-

⁹⁶ *Ibid.*, at 25.

⁹⁷ *Ibid.*

⁹⁸ Yahong Li, *supra* note 68, at 79.

⁹⁹ *For example*, in 1983 when China was still in its initial stage of reform and opening-up, China’s real use of FDI only stood at 636 million U.S. dollars. In 2002, the figure soared to 52.743 billion dollars, an increase of 82 times as against that in 1983, outstripping that of the United States in the world. See “FDI fueling China’s Economic Boom,” *People’s Daily*, December 13, 2003.

¹⁰⁰ Yahong Li, *supra* note 68, at 80 (quoting Paul Tackaberry, “Intellectual Property Risks in China: Their Effect on Foreign Investment and Technology Transfer,” *J. Asian Bus.* (1998), at 34, 45).

able that the dazzling technologically innovative products, such as frequently upgraded computer software or biotechnology, could have been created without IPR protecting inventions from unauthorised copying so that investment in R&D can be captured and capitalised upon. In a modern society, an increasing number of companies have found their specialist knowledge one of their most valuable assets as it determines their future capacity to generate profit.

However, as the above passage has demonstrated, IPR is based on the notion of balance in that it must optimise benefit for both innovators and society at large.¹⁰¹ In many developing nations which are only “beginning to exploit intellectual property of their own,”¹⁰² complaints have been raised as to the unsymmetrical and high contingent benefits they can expect from the existing IPR system, which tends to benefit foreign proprietors and discourage domestic inventors.¹⁰³ From the point of view of developing countries, stronger IPR protection may be argued as increasing the incentives for innovation and encouraging international technology transfer; however, “it also could raise the costs of acquiring new technology and products,” entrenching the global terms of trade to the disadvantage of technology consumers and shifting the world trading system in favour of technology producers.¹⁰⁴

In this respect, as Maskus has noted, the policy problems as extended consequences of the TRIPs regime have aroused diametrical points of view from both advocates and opponents of IPR, and the gaps are especially palpable in relation to sensitive issues such as consumer interest in affordable products, in particular patent protection of pharmaceuticals and biotechnological inventions,¹⁰⁵ which have been the focus of much attentions in the Doha round negotiation.¹⁰⁶

The question addressed in this section is whether there is a universal optimal design of IPR or whether the design needs to vary to reflect domestic characteristics and if so what characteristics need to be taken into account.

Overprotection – Cultural Appropriation?

Faced with the dilemma of the current global IPR system, more and more scholars and political elites have discerned a tendency towards overprotection of IPR leading to anti-competitive effects that are pernicious to both develop-

¹⁰¹ Cornish, *supra* note 30, at 11-2.

¹⁰² *Ibid.*, at 31.

¹⁰³ See Keith Maskus, *Intellectual Property Rights in the Global Economy* 175 (2000)(noting that “[o]wners of patents in developing countries are overwhelmingly foreign; there is little likelihood of that changing for a considerable period of time”).

¹⁰⁴ *Ibid.*

¹⁰⁵ *Ibid.*

¹⁰⁶ See *infra* § 5.4.2

ing and developed countries by diluting important liberties and freedoms.¹⁰⁷ Taking copyright as an example, implementing a stronger IPR system in the short-run should be judged not only by its ability to protect the interests of owners of copyrights and related rights, but also by its commitment to avoid pitfalls caused by overprotection that may lead to cultural appropriation and hinder the pace of global civilisation. This is apparently inconsistent with the long-term goal set out by the TRIPs Agreement.

As Professor Lessig states, “[w]hile it is clear that patents spur innovation in many important fields, it is also clear that for some fields of innovation, patents do more harm than good,” particularly in light of the cultural and technological divide that is hard to transcend in the foreseeable future.¹⁰⁸ It seems that the hypothesis linking high standards of IPR protection to trade flows and technology transfer for developing countries has not by any means been proven. On the contrary, overprotection on an improper development stage may hinder rather than stimulate the trade by which technology transfer is achieved and in the long run act to the detriment of global development.

Counterfeiting and Piracy – A Statistical Illustration

Counterfeiting, piracy,¹⁰⁹ and infringements of IPR in general, are reaching epidemic proportions and have become an international phenomenon in emerging economies, taking on an international dimension with dramatic repercussions on world trade.¹¹⁰ Weak protection of IPR is, or used to be, part of economic planning in some developing and less-developed countries in a cer-

¹⁰⁷ Donald P. Harris, “TRIPs Rebound: An Historical Analysis of How the TRIPs Agreement Can Ricochet Back Against the United States,” *Nw J. Int’l L. and Bus.* 116 (2004), at 101 (arguing that “TRIPs’ focus on private interests will not only harm developing countries, but also will rebound back against the United States, thereby inflicting significant harm”).

¹⁰⁸ Taken an empirical approach, Professor Lessig demonstrates a number of harms caused by high-level patent protection. As Lessig sees it, the global IPR regime, a system originally designed as a stimulator for innovation, has paradoxically become a weapon for safeguarding the multinational corporations, attacking cutting-edge creativity and ultimately harming public interests. See Lawrence Lessig, *the Future of Ideas*, Random House 259 (2001).

¹⁰⁹ There has been significant divergence among scholarly opinions concerning the exact definitions of counterfeiting and piracy. Nevertheless, in this book, counterfeiting refers to the production of fake products without the authority of the owner of a patent or trademark in respect of protected goods. Piracy refers to the use of the creative property of others without their permission. In general terms, counterfeiting means an infringement of an industrial property right while piracy means an infringement of copyright and related rights.

¹¹⁰ See “Counterfeiting and Piracy: the Commission Proposes European Criminal-law Provisions to Combat Infringements of Intellectual Property Rights,” Europa Press Release: IP/05/906, July 12, 2005.

tain stage of their economic development.¹¹¹ In order to expedite the process of economic development, developing countries are apt to apply for a tolerant IPR policy,¹¹² which allows their citizens to “steal” IPR without paying or paying less royalties.¹¹³

Patented pharmaceuticals have been seen as an appealing target for imitation through the production of pirated generic versions, either by applying methods disclosed in the patent itself or by accomplishing chemical analysis of the final product and the expiration of alternative synthetic routes.¹¹⁴ The negative impact of the patented pharmaceuticals is not limited to developing countries; developed countries are also exposed to significant health risks associated with the untested generic drugs.¹¹⁵ One official statistic shows that counterfeit drug sales are estimated to reach seventy-five billion dollars in 2010, a ninety-two percent increase from 2005.¹¹⁶

The software industry has been targeted as another vulnerable domain for piracy. A survey carried out by the International Data Corporation (IDC) research firm for the Business Software Alliance (BSA) suggests that, while fifty-one billion Pounds was spent globally in 2003 on software applications, another twenty-nine billion Pounds worth was illegitimately installed, representing fifty-eight percent equivalent of the legitimate market.¹¹⁷ According to BSA, one out of every three copies of personal computing software installed in 2005 was pirated.¹¹⁸ The piracy rate for commercial software was thirty-six percent, but that percentage has risen dramatically in parts of Asia and Eastern Europe.¹¹⁹

In Europe, counterfeiting and piracy affects “the proper functioning of the internal market,”¹²⁰ resulting in the loss of an estimated one hundred thousand jobs per annum in the EU.¹²¹ The European Commission (EC) statistics show

¹¹¹ For a detailed explanation of stage theory of economic development, *see, infra* § 4.1.3.

¹¹² Fred Warshofsky, *The Patent Wars: the Battle to Own the World's Technology*, New York: John Wiley and Sons 10 (1994).

¹¹³ *Ibid.*, at 15.

¹¹⁴ See Ronald J.C. Corbett, “Protecting and Enforcing Intellectual Property Rights in developing Countries,” 35 *Int'l Lawyer* 1085 (2001).

¹¹⁵ *Ibid.*

¹¹⁶ See “Counterfeit Medicines: the Silent Epidemic,” WHO News Releases 2006, *available at* <<http://www.who.int/mediacentre/news/releases/2006/pr09/en/index.html>>, last visited January 3, 2007.

¹¹⁷ See “Enabling Tomorrow's Innovation,” *IDC White Paper and BSA Opinion Poll*, October 2003, *available at* <<http://www.globaltechsummit.net/press/IDC-CEOSurvey-2003.pdf>>, last visited August 3, 2006.

¹¹⁸ See “Study: Software Piracy Costs \$34 Billion,” *ZDNet News*, May 23, 2006.

¹¹⁹ *Ibid.*

¹²⁰ “Counterfeiting and Piracy: Commission Proposes Criminal Law Provisions to Combat Intellectual Property Offences,” IP/06/532, March 26, 2007.

¹²¹ See “Memorandum to the Representatives of Community Trade Marks Registered with the Office on the Possibility of Defending the Rights of the Proprietors of Community

an increase of eight hundred percent in counterfeiting and pirated goods intercepted by EU Customs from 1998 to 2002.¹²² In 2005, twenty-six thousand cases were dealt with, which is an increase of twenty percent over the 2004 figure.¹²³ In response, the EC implemented a Green Paper¹²⁴ in late 2000 aimed at combating counterfeiting and piracy within the internal market.¹²⁵

The Green Paper shows that counterfeiting and piracy is estimated to account for five to seven percent of world trade, representing two hundred to three hundred billion euros a year in lost revenue and the loss of an estimated two hundred thousand jobs worldwide.¹²⁶ It is estimated in the Green Paper that European businesses that operate internationally are losing between four hundred and eight hundred million euros in the single market and two thousand million euros in non-member countries.¹²⁷

Optimal Protection – “Just Right”?

As discussed above, it may be uncontroversial to argue that countries ought to be able to have IPR standards that line up with their economic strengths and comparative advantages. Developing countries have over the last decades persistently called for flexibility of international rules, taking into account different economic stages of development.¹²⁸ In such developing countries, technological competitiveness has not yet been established. While human capital plays the key role in promoting economic growth in the developing world, it has been insufficient to produce desirable inventions.¹²⁹ The argument is that

Trade Marks,” OHIM, available at <<http://oami.eu.int/EN/aspects/piracy/note.htm>>, last visited October 19, 2007.

¹²² See “EU Strategy to Enforce Intellectual Property Rights in Third Countries - Facts and Figures,” Brussels, November 10, 2004.

¹²³ *Ibid.*

¹²⁴ From a European perspective, a Green Paper is a document published by the European Commission that is intended to stimulate discussion of chosen controversial issues at the European level. A Green Paper is usually meant to invite interested bodies or individuals to participate in a consultation process and debate on the basis of the proposals they put forward. A Green Paper may also give rise to legislative developments that are then outlined in a White Paper which contains an official set of proposals in specific policy areas that are used as a vehicle for their development. See “Green Paper” at *Europa Glossary*, available at <http://europa.eu/scadplus/glossary/green_paper_en.htm>.

¹²⁵ The purpose of the EC Green Paper is to “assess the economic impact of combating counterfeiting and piracy in the Single Market, evaluate the effectiveness of the legislation in this sphere and decide whether new initiatives are called for at Community level.” For full text of the Green Paper, see “Green Paper on Combating Counterfeiting and Piracy in the Internal Market (1998).”

¹²⁶ See Green Paper, *ibid.*

¹²⁷ *Ibid.*

¹²⁸ Cornish, *supra* note 30, at 31.

¹²⁹ Mikhaelle Schiappacasse, “Intellectual Property Rights in China: Technology Transfers and Economic Development,” 2 *Buff. Intell. Pro. L.J.* 166 (2003-2004) (stating that the

IPR protection in developing nations should not be as strong as that of developed nations in the early stage of their development. Overprotection of IPR is as, if not more, harmful as underprotection. To ensure the optimal level of IPR protection is advantageous not only for developing countries but also for developed countries as well. To this end, some scholars, particularly scholars from economics, have attempted to identify an optimal degree of IPR protection.¹³⁰ In reality, however, the choice for the IPR protection may be far more complex than designing a model, because the questions as to whether the optimal level of protection does exist, and whether both the overprotection and underprotection can be avoided are attributed to a number of interrelated factors. In the following sections, IPR protection will be examined from both legal and political perspectives.

2.2 IPR and WTO Agreement – A Legal Analysis

2.2.1 The Legal Concepts of IPR

In a legal context, the phrase “intellectual property” is a metaphor for a fashionable description of ideas in the form of inventions, artistic works, trade symbols and other aspirants.¹³¹ The traditional legal classification of IPR defines the creative output protected by the law, for example, of patents, copyright and trademarks.¹³² Significant social, political and technological developments over the past decades have exerted a considerable influence on how IPR is created, exploited and traded and, as a result, legal protection of IPR has become a subject of paramount importance and universal interest in not only the research but also the development and commercialisation of emerging technologies.

long-term beneficial effect from strengthened IPR protection in developing countries is dependent on various factors, such as increasing human capital).

¹³⁰ See e.g., Yum K. Kwan & Edwin L.-C. Lai, “Intellectual Property Rights Protection and Endogenous Economic Growth,” 27 *Journal of Economic Dynamics and Control* 853-873 (2003) (asserting that underprotection of IPR is much more likely than overprotection in their model).

¹³¹ Cornish, *supra* note 30, at 3, 6-9 (noting that intellectual property “is a branch of the law which protects some of the finer manifestations of human achievement”).

¹³² See Cornish, *ibid.*, at 6-11. See also Bently and Sherman, *supra* note 1, at 1-3.

2.2.2 The International Architecture of Protection

The protection of IPR has been an international issue since the second half of the nineteenth century.¹³³ The variety of international business transactions in which IPR forms a part is significant and the design of global strategies to manage intangible assets has become increasingly fashionable to the extent that the interests of international trade are safeguarded by a stable IPR system.¹³⁴ However, as developed economies have become increasingly knowledge-based and thus have far more comparative advantages than developing countries, the position of the latter is considerably marginalised. In this context, IPR protection has become a key issue involving substantially in both international law and development policy.

The strengthening of the global marketplace with the WTO Agreement and the compelling trend of the intensified globalisation have generated increasing pressure on the WTO members from developing world to liberalise their trading regimes by providing foreign nationals with national treatment. Whilst for the most part this means dismantling the protection afforded to domestic industry, in the case of IPR, the TRIPs Agreement operates to increase standards of domestic protection.

One of the significant characteristics of national law on IPR is territoriality.¹³⁵ If the IPR proprietors wish to extend recognition of their rights to other countries, they will have to make an application to the countries concerned. In this context, the “universal protection” of IPR is granted by individual countries. The lengthy and costly application process, as well as the considerable risks of procedural differences made it essential to find ways to ensure that protection obtained in one country could be extended to another.¹³⁶

Attempts towards eliminating this obstacles was subsequently initiated in the last quarter of the nineteenth century with the main three pillars being the Paris Convention for the Protection of Industrial Property signed in 1883, the

¹³³ The first conventions concerning international protection of intellectual property are the Paris Convention for the Protection of Industrial Property (1883) and Berne Convention for the Protection of Literary and Artistic Works (1886). As a result of these two conventions, the IPR issues were converted from a national forum to an international arena. For a detailed account of this conversion, *see generally*, Vincenzo Vinciguerra, “A Brief Essay on the Importance of Time in International Conventions on Intellectual Property Rights”, 39 *Akron L. Rev.* 635 (2006).

¹³⁴ *See* Adam I. Hasson, “Domestic Implementation of International Obligations: The Quest for World Patent Law Harmonization,” 25 *B.C. Int’l & Comp. L. Rev.* 374 (2002).

¹³⁵ *See* Cornish, *supra* note 30, at 26 (stating that one way of expressing the close association of national policy and legal right lies in the principle of “territoriality,” and this characteristic is often attributed to the major form of intellectual property).

¹³⁶ *Ibid*, at 747 (mentioning that intellectual property “forms a central barrier along the boundary between the fair and unfair competition, and ideas where the boundary should be drawn undoubtedly vary”).

Berne Convention for the Protection of Literary and Artistic Work in 1886, and the Madrid Agreement Concerning the International Registration of Marks in 1891.¹³⁷ However it was not until 1967 that the World Intellectual Property Organisation (WIPO) was established to coordinate and oversee the protection of IPR generally within the member states.¹³⁸ WIPO, a United Nations specialised agency, has been particularly in promoting worldwide protection of various forms of intellectual property and assisting its members to meet their obligations for the protection of IPR.¹³⁹

However, neither the Conventions nor the WIPO prescribed specific levels of IPR protection only the processes by which such protection can be accessed. To enable this change, the issues of IPR had to find a place on the agenda of international trade talks where it could be part of a negotiated package. The justification was that “weak protection of IPR distorts natural trading patterns and acts as an impediment to free trade.”¹⁴⁰

More to the point, the particular voting system of WIPO fell short of the interests of developed nations and impeded the efforts of developed countries to seek harmonised standards.¹⁴¹ Accordingly, IPR protection was added to the agenda of the Uruguay Round of GATT negotiations at the request of developed countries in 1986. Since then, developed countries have started to “pull the debate away from WIPO,” trying to integrate the issue of IPR with that of free trade.¹⁴² In practical terms, this meant that negotiations over IPR were integrated into the GATT/WTO based on multilateral negotiations coupling free trade with IPR, leading to the TRIPs Agreement in Marrakesh in 1994.¹⁴³ By then, the United States and other developed countries had at last “achieved

¹³⁷ For full text of these two conventions, see Andrew Christie & Stephen Gare, *Statutes on Intellectual Property*, Blackstone’s 354-8, 490-8 (2003).

¹³⁸ See Robert J. Pechman, “Seeking Multilateral Protection for Intellectual Property: The United States “TRIPs” Over Special 301,” 7 *Minn. J. Global Trade* 179, 181 (1998) (stating that the Paris Convention left the enforcement of IPR up to each member state).

¹³⁹ While WIPO administers most of the international Conventions concerning IPR, some other agencies are also playing specific roles. For example, the UN Educational Scientific and Cultural Organisations (UNESCO), which is administering Universal Copyright Convention, is a UN institution, which has been playing an essential part in the broad areas concerning cultural diversity and pluralism.

¹⁴⁰ See Jacques Olivier and Aiting Goh, “Free Trade and Protection of Intellectual Property Rights: Can We Have One without the Other?” Available at <http://www.hec.fr/hec/fr/professeur_recherche/cahier/finance/CR730.pdf>.

¹⁴¹ Van Wijk and G. Junne, “Intellectual Property Protection of Advanced Technology-Changes in the Global Technology System: Implications and Options for Developing Countries,” United Nations University, Institute for New Technologies, Maastricht, Working Paper No10 (1993).

¹⁴² Joshua J Simons, “Cooperation and Coercion: The Protection of Intellectual Property in Developing Countries,” 11 *Bond L.Rev.* 60 (1999).

¹⁴³ *Ibid.*

their objective of incorporating internationally enforceable IPR norms into the world trading system.”¹⁴⁴

Upon its establishment, the TRIPs Agreement has been hailed as the “milestone” in the development of international IPR regime at the end of the twentieth century,¹⁴⁵ and “the most far-reaching and comprehensive legal system ever concluded at the multinational level in the area of IPR,”¹⁴⁶ which “revolutionised international intellectual property law.”¹⁴⁷

Although the TRIPs Agreement does not impose substantial provisions and create a unitary framework for the IPR protection,¹⁴⁸ it does impose minimum international standards for the protection of IPR by which WTO members are obliged to demonstrate full compliance with the substantive obligations of the primary international intellectual property conventions, including the Berne Convention and the Paris Convention.¹⁴⁹ In its preamble, TRIPs specified as one of its objectives “to reduce impediments to international trade, to promote effective protection of IPR, and to ensure that measures to enforce IPR do not become barriers to legitimate trade.”¹⁵⁰ In other words, although TRIPs does not introduce a uniform set of substantial rules, by explicitly underlining the obligation of each member to take measures to eliminate abuses of IPR, it potentially and indirectly establishes leverage against different member states.

The establishment of TRIPs within the WTO framework of the multilateral agreement is perhaps the most ambitious and adventurous attempt to harmonise IPR on a worldwide scale,¹⁵¹ not least because TRIPs enables enforcement by private parties at the national level,¹⁵² and where this fails to provide an effective remedy, it enables enforcement by states at an international level,¹⁵³ using “WTO’s comparatively hard-edged dispute settlement mechanism in

¹⁴⁴ Helfer, “Regime Shifting,” *supra* note 71, at 23.

¹⁴⁵ See Vincent Chiappetta, “The Desirability of Agreeing to Disagree: The WTO, TRIPs, International IPR Exhaustion and a Few Other Things,” 21 *Mich. J. Int’l L.* 333, 335-336, 368 (2000).

¹⁴⁶ See e.g., Carlos M. Correa and Abdulqawi A. Yusuf, *Intellectual Property and International Trade: The TRIPs Agreement*, London: Kluwer Law International 17 (1998); Charles McManis, “Intellectual Property and International Mergers and Acquisitions,” 66 *Univ. Cincinnati L. Rev.* 1283, 1286 (1998).

¹⁴⁷ Helfer, *supra* note 71, at 23.

¹⁴⁸ Eric Allen Engle, “When is Fair Use Fair?: A Comparison of E.U. and U.S. Intellectual Property Law,” 15 *Transnat’l L.* 187 (2002).

¹⁴⁹ Article 1 of TRIPs Agreement, *supra* note 2.

¹⁵⁰ See preface of Agreement on Trade Related Aspects of Intellectual Property Right, ANNEX 1C of The Uruguay Round Final Act.

¹⁵¹ Paul Demaret, “The metamorphoses of the GATT: from the Havana Charter to the World Trade Organization,” 34 *Colum. J. Transnat’l L.* 162 (1995).

¹⁵² Article 41-60 of TRIPs provides civil and administrative procedures and remedies, as well as provisional measures to prevent IPR infringement. Article 61 provides criminal procedure. See TRIPs Article 61.

¹⁵³ Donald P. Harris, *supra* note 107, at 116.

which treaty bargains are enforced through mandatory adjudication backed up by the threat of retaliatory sanctions.”¹⁵⁴ For these reasons it exercises a profound influence on domestic legislation and trade policy and in this regard has increasingly marginalised the international IPR agreements negotiated under the auspices of the WIPO.

Indeed, the harmonising effect of TRIPs is significant. The United States has, for example, instituted WTO dispute settlement proceedings against Sweden, Ireland, Denmark, Greece, and the European Union.¹⁵⁵ In 1998, the United States announced the initiation of WTO dispute settlement proceedings against Greece concerning rampant television piracy in Greece and their failure to comply with the enforcement provisions of the TRIPs Agreement.¹⁵⁶ To address such concerns, Greece swiftly enacted legislation that provided additional administrative measures and procedures to strengthen its IPR enforcement system.¹⁵⁷ Similarly, in responding to external pressure, in late 1999, Sweden amended its intellectual property laws to provide prompt and effective provisional relief in civil enforcement proceedings.¹⁵⁸ In February 1998, Ireland committed to enact comprehensive copyright reform legislation and, in June 1998, passed expedited legislation increasing criminal penalties for copyright infringement and addressing other enforcement issues.¹⁵⁹ Denmark has duly established a Special Legislative Committee to consider the issues addressed by the United States and proposed options for amending its law to strengthen provisional remedies available to IPR holders.¹⁶⁰

¹⁵⁴ Laurence R. Helfer, “Regime Shifting,” *supra* note 71, at 2.

¹⁵⁵ To date, a number of cases have ever been brought to the WTO dispute settlement procedure. Among the early WTO complaints, the cases involving Sweden and Denmark were brought for failure to provide *ex parte* civil remedies, in violation of Article 50 of TRIPs, while the cases against Ireland and Greece (the latter for television piracy) were brought for violations of Articles 41 and 61. See “IIPA Paper on Copyright Enforcement under the TRIPs Agreement October 2004,” IIPA, available at <http://www.iipa.com/rbi/2004_Oct19_TRIPS.pdf>. The WTO complaint against China in April 2007 was a recent case which will be discussed in the following chapters.

¹⁵⁶ See “2000 Special 301 Report,” Consulate General of the United States in Hong Kong & Macau, available at <http://hongkong.usconsulate.gov/uploads/images/J6EH6KGM-c0kwdU0CSnXhA/usinfo_301_00-special.pdf>.

¹⁵⁷ *Ibid.*

¹⁵⁸ See “USTU Announces Results of Special 301 Annual Review,” USTR Press Releases, May 1, 1998, at 22, available at <http://hongkong.usconsulate.gov/uploads/images/Q8iJECEI_jcMpryznqVkw/usinfo_301_1998050101.pdf>.

¹⁵⁹ “2000 Special 301 Report,” *supra* note 155.

¹⁶⁰ “USTU Announces Results of Special 301 Annual Review,” *supra* note 158, at 7, 23.

2.2.3 The “Transplant” of TRIPs: A Comparative Law Perspective

Developing nations have made a dramatic turn towards market-orientated policies over the past decades.¹⁶¹ As Susan Sell observes, some years ago, developing nations were engaged in pressing for a New International Economic Order (NIEO)¹⁶² based on economic nationalism, import substitution, and the rejection of comparative advantage and global liberalism.¹⁶³ Today, democratisation and globalisation have had a significant impact on “increase[ing] the number of legal transplants” and, as a consequence, “most major legislation [in developing countries] now has a foreign component.”¹⁶⁴ As a notable instance, the establishment of the TRIPs regime has changed the scene of the IPR of the developing world beyond recognition, and aroused energetic legislative zeal that makes it rather difficult to keep pace with.¹⁶⁵ What has occasioned these changes?

Transplantation and Participation: A Reluctant Deal?

The energetic legislative zeal in the developing world reflects the fact that developing countries have adjusted their foreign policy as a strategy to avoid being marginalised in the global trading system. As Gunther Teubner describes, the invisible social networks, invisible professional communities, and invisible transborder markets have transcended territorial boundaries, making the global law of business transactions visible.¹⁶⁶ In such an increasingly open global

¹⁶¹ Susan K. Sell, “Intellectual Property Protection and Antitrust in the Developing World: Crisis, Coercion, and Choice,” in *Power and Ideas: North-South Politics of Intellectual Property and Antitrust*, State University of New York Press 175 (1995).

¹⁶² The New International Economic Order, a broad model for restructuring the world economy, first put forward at a summit meeting of the non-aligned movement in early 1970s where developing nations voiced their opinions on enhanced economic opportunities. The NIEO has historically defined itself in opposition to the workings of the conventional international political agenda in which developing countries have been marginalised. For a further discussion, see Michael Hudson, *Global Fracture: The New International Economic Order*, Pluto Press (2005); Robert Gilpin, *Global Political Economy: Understanding the International Economic Order*, Princeton University Press (2001).

¹⁶³ Sell, *supra* note 161, at 175.

¹⁶⁴ See Jonathan M. Miller, “A Typology of Legal Transplants: Using Sociology, Legal History and Argentine Examples to Explain the Transplant Process,” 51 *Am. J. Comp. L.* 839 (2003).

¹⁶⁵ Christopher Heath, “Intellectual Property Rights in Asia – Projects, Programmes and Developments,” Online Publication of Max Planck Institute for Intellectual Property, Competition and Tax Law, available at <<http://www.intellecprop.mpg.de/Online-Publikationen/Heath-Ipeaover.htm>>.

¹⁶⁶ Gunther Teubner, “‘Global Bukowina’: Legal Pluralism in the World Society,” at *Global Law without a State* (Gunther Teubner ed.), Dartmouth Publishing Group 3-7 (1997).

economy, it is inevitable for developing nations to respond to multinational treaties and to harmonise the participating countries' laws.¹⁶⁷ In addition, these countries are fully aware that there would be no way of claiming good records in areas such as international human rights and protection of the environment without importing some foreign or international models; similarly, there would be no way of engaging in global market or expecting foreign investment without moving their legal regimes towards international commercial standards.¹⁶⁸ As a result, upon the establishment of the WTO, the obligations to impose a series of international legal standards extended rapidly to the entire WTO members.

Earlier legal transplants, including the reception of Roman law in Europe, the enactment of the Chinese codes in Eastern and Southeastern Asia, and the introduction of Spanish and Portuguese laws to Latin America, have been carried on as ubiquitous practice for centuries.¹⁶⁹ Substantial literature has been generated on the concept of legal transplants in the context of comparative law. However, research to date leads to substantial divergence mainly embedded in bifurcated propositions of optimists and sceptics of the theory. As noted by Richard Small, in essence, the debate over this point "revolves around the question of whether and to what extent law is transferable between nations under different cultural environment."¹⁷⁰ While scholars such as Legrand link the fundamental differences between legal systems and cultural values in a strict sense, casting doubt over the possibility of legal transplant,¹⁷¹ Alan Watson emphasises the autonomous nature of law, maintaining that there is no inherent relationship between law and the society in which it operates.¹⁷² The theory put forward by Watson characterises the proposition that legal trans-

¹⁶⁷ See Miller, "A Typology of Legal Transplants," *supra* note 162, at 840. See also Vernon Valentine Palmer (ed.), *Louisiana: Microcosm of a Mixed Jurisdiction*, Carolina Academic Press 4 (1999) (asserting that "there doesn't exist in the modern world a pure judicial system formed without exterior influence"). Similar analysis can also be found in William Twining, *Globalisation and Legal Theory* (2000) (exploring globalisation and its implications for legal theory).

¹⁶⁸ *Ibid.*

¹⁶⁹ Daniel Berkowitz, *et al.*, "The Transplant Effect," 51 *Am. J. Comp. L.* 172 (2003).

¹⁷⁰ See Richard G. Small, "Towards a Theory of Contextual Transplants," 19 *Emory Int'l L. Rev.* 1431 (2005).

¹⁷¹ Pierre Legrand, "The Impossibility of 'Legal Transplants,'" 4 *Maastricht J. Eur. & Comp. L.* 114 (1997).

¹⁷² Alan Watson, "Comparative Law and Legal Change", 37 *Cambridge L. J.* 313-4 (1978) (mentioning that "[t]here is no exact, fixed, close, complete, or necessary correlation between social, economic, or political circumstances and a system of rules of private law"); Watson, *The Evolution of Law*, 119 (1985) stating that "[l]aw is treated as existing in its own right [and...] has to be justified in its own terms[...]. This two features make law inherently conservative." For a detailed introduction of Watson's work and his theories, see William Ewald, "Comparative Jurisprudence (II): The Logic of Legal Transplants," 43 *Am. J. Comp. L.*, 489 (1995).

plants are socially feasible,¹⁷³ nevertheless, many commentators have emphasised that a successful legal change through transplantation requires some level of domestic adaptation in an economic, political and cultural context.¹⁷⁴ During the transplanting process, legality can only be determined by the ability of a receiving country “to give meaning to the transplanted formal legal order and to apply it within the context of its own socioeconomic conditions.”¹⁷⁵ It may be true that, while the transferability is compelling, a “fitting-in” process is necessary to ensure effectiveness of a transplant in a unique socioeconomic environment. As Francis Cardinal George describes, neglecting the cultural reception process in legal transplantation under different social and ethical environment amounts to “viewing law as the engine driving the cultural train,” and is destined to fail.¹⁷⁶ Legal transplants are feasible, but the cultural adaptation is essential.

In this context, the enthusiastic and energetic legal transplants that take place in developing countries are often, if not always, outcomes of political expediency – developing countries accept these laws as part of a process of participation in international affairs. As a result, as noted by Miller, in many circumstances, developing countries initiate “transplants whose acceptance is motivated by a desire to please foreign states, individuals or entities,” and to “facilitate international commerce.”¹⁷⁷ It is unsurprising that developing countries may have transplanted a whole set of Western styled legal regimes without the adaptation process.

TRIPs Norms: A “Hijacked Issue”?

Intellectual property law has posed as a radically new form of legal transplant in developing countries since it usually has no counterpart in the indigenous legal traditions of the participating states. However, upon the establishment of the TRIPs Agreement, the harmonised IPR global network, which had been owned exclusively by developed countries, extended to the developing world, including many developing countries whose previous commitment to IPR protection was “nonexistent or at best equivocal.”¹⁷⁸ The transplantation of intel-

¹⁷³ Alan Watson, *Legal Transplants: An Approach to Comparative Law* 7 (1993).

¹⁷⁴ See Kahn-Freund, “On Uses and Misuses of Comparative Law,” 37 *Mod. L. Rev.* (1974), at 12-13; Ugo Mattei, “Efficiency in Legal Transplants: An Essay in Comparative Law and Economics,” 14 *Int’l Rev. L. & Econ.* 16, 19 (1994). See also William Ewald, “Comparative Jurisprudence (II): The Logic of Legal Transplants,” 43 *Am. J. Comp. L.* 489 (1995) (emphasising the causal link between law and society). See also, Nicholas H. D. Foster, “Transmigration and Transferability of Commercial Law in a Globalized World,” in Andrew Harding & Esin Orucu (eds.), *Comparative Law in the 21st Century*, Kluwer Law International 55, 58-9 (2002).

¹⁷⁵ Daniel Berkowitz, *et al*, “The Transplant Effect,” 51 *Am. J. Comp. L.* 179 (2003).

¹⁷⁶ Francis Cardinal George, “Law and Culture,” 1 *Ave Maria L. Rev.* 6 (2003).

¹⁷⁷ See Miller, *supra* note 164, at 847.

¹⁷⁸ Helfer, *supra* note 71, at 23.

lectual property law via the WTO has become one of the most visible fields of legal reform imposed by industrialised nations in the context of neoliberal globalisation advocated as the “Washington Consensus,”¹⁷⁹ and it is of practical significance to analyse the transplantation of TRIPs as an important international treaty from perspective of comparative law.

However, in the arena of TRIPs, any transplanted intellectual property structure only works properly after recasting the indigenous tradition of that imported law in the image of its original model. An overriding concern here is that, this “fitting-in” process in launching a substantial set of intellectual property protection system is usually lengthy and sometimes costly, but developed countries have a tendency to be geared towards pragmatism and a desire for prompt returns. As Assafa Endeshaw claimed, the “universal templates” created in the international lawmaking process are modelled after laws in developed countries and fail to take into consideration the socio-economic circumstances of developing and less-developed countries.¹⁸⁰ It should not be unexpected that in their implementation of TRIPs, developing countries may be reluctant to exceed the minimum necessary to achieve compliance and gain protection against possible retaliation from their trading partners. In this connection implementation will inevitably require domestic legislation. It is therefore not surprising that, while the transplant of TRIPs has ostensibly been embraced by almost all the countries, there remain unresolved tensions and debates as to the legal reform in light of law and development.

As Nick Foster has demonstrated, the manner of a recipient may affect, if not determine, the effectiveness of an importing law – if, for instance, a law is received passively through “imposition by a colonial power,” this law may lack natural affinity, and the attitude towards enforcing it may be contrastingly different from law adopted actively and willingly.¹⁸¹ Legal reform, in this context, has been depicted as “externally-dictated transplants” for developing countries.¹⁸² In the area of world trade and intellectual property, many developing countries adopted high level standards of IPR due to the coercive demand of developed countries.¹⁸³

¹⁷⁹ The phrase “Washington Consensus” is a concept synonymous with “neoliberalism” or “neoliberal globalisation” in the context of trade and development. It was initially expressed in late 1980s by John Williamson who coined the ideology for globalisation. For a comprehensive account of the phrase, see Tamara Lothian, “The Democratized Market Economy in Latin America (and Elsewhere): An Exercise in Institutional Thinking within Law and Political Economy,” 28 *Cornell Int’l L.J.* 175-9 (1995).

¹⁸⁰ Assafa Endeshaw, “The Paradox of Intellectual Property Lawmaking in the New Millennium: Universal Templates as Terms of Surrender for Non-industrial Nations; Piracy as an Offshoot,” 10 *Cardozo J. Int’l & Comp. L.* 47 (2002).

¹⁸¹ Nicholas H. D. Foster, “Company Law Theory in Comparative Perspective: England and France,” 48 *Am. J. Comp. L.* 612 (2000).

¹⁸² See Miller, *supra* note 164, at 847.

¹⁸³ *Ibid.*, at 848; for a comparative analysis of legal transplants, see *infra* § 6.2.3 & § 6.5.1.

While the degree of external pressure may affect acceptance of a transplanting law, the real success of a transplant depends on the extent of the participation of the recipient in the transplanting process and the genuine interests of the state to strengthen its protection mechanism. An externally-dictated transplant during its initial phase is apt to fail if the domestic incentives or external coercions disappear;¹⁸⁴ however, as has been demonstrated, “one clear motivation for a legal transplant is the presence in the receiving country of individuals interested in investing in the transplanted legal system so that they can obtain political or economic benefits from their investment.”¹⁸⁵ Otherwise, the advocates are doing little more than breed disrespect for laws that are perceived by the recipients as “out of touch” with reality, making the laws colourful but unenforceable.¹⁸⁶ At the point where the new concept of IPR is slowly filtering into people’s minds, and sufficient individuals such as inventors, authors and other IPR appropriators are tempted in an improved IPR standards, the legal transplant may take root during the process of local adaptations and become domestically assimilated and gradually indigenised.

In this context, from an objective perspective, TRIPs may well deserve criticism for its potentially asymmetric effects across countries despite the praise it has enjoyed as a milestone in world IPR harmonisation.¹⁸⁷ As Profes-

¹⁸⁴ *Ibid*, at 868.

¹⁸⁵ This theory creates legal base for what has been described as “entrepreneurial transplants.” *See ibid*, at 850.

¹⁸⁶ Francis Cardinal George, *supra* note 238.

¹⁸⁷ *The Political Economy of International Trade Law*, Essays in Honour of Robert E. Hudec, Edited by Daniel L. M. Kennedy and James D. Southwick, Cambridge University Press 296-327 (2002) (where the authors argues that “[t]he relationship to trade is minimal and, indeed, often negative, so the term ‘Trade-Related-Intellectual-Property’ is close to being an oxymoron;” John F. Duffy, “Harmony and Diversity in Global Patent Law,” 17 *Berkeley Tech. J.* 685 (2002) (the author, while acknowledging the value of certain harmonisation at national level, argues that “uniformity [...] makes the law unresponsive to local variations, eliminates interjurisdictional competition and decreases the possibilities for legal experimentation”). Marci A. Hamilton, “The TRIPs Agreement: Imperialistic, Outdated, and Overprotective,” Adam D. Moore (ed.), *Intellectual Property: Moral, Legal, and International Dilemmas* (1997)(arguing that TRIPs Agreement imposes a western-styled intellectual property legal regime, which is not necessarily the Ideal Paradigm for the developing world; Jerome H. Reichman, “Intellectual Property in International Trade: Opportunities and Risks of a GATT Connection,” 22 *Vanderbilt J. Trans’l L.* 747-891 (1989)(discussing the violation of principle of economic sovereignty and deriving a set of analytical propositions to guide a TRIPs negotiation conducted in the spirit of cooperation and good faith); *see also* T. N. Srinivasan, *the TRIPS Agreement: A Comment Inspired by Frederick Abbott’s Presentation* (1998)(arguing that “it was a colossal mistake to have included TRIPs in the WTO, as one of the agreements that was part of the single-undertaking framework of the Uruguay Round agreement, for at least two reasons: First, whatever be the merits of strengthening IPR protection around the world, incorporating IPR in the WTO framework by merely asserting that such protection is trade-related, seems primarily for the purpose of legitimizing the use of trade policy instruments to enforce IPR protection”).

sor Vincent Chiappetta pointed out, the current harmonisation effort is “ill-conceived and unsupportable.”¹⁸⁸ By attracting or forcing countries to adopt “universal’ standards,” the achievement of harmonisation could “mark ‘progress’ along an ill-defined path prematurely taken, or indeed the wrong path entirely.”¹⁸⁹ Not only is there no international consensus regarding the inherent superiority of a market economics approach to IPR, “much work remains to be done regarding the related distributional inequities” it generates to ensure developing countries genuinely benefit from refocusing and implementing the core mission of the world trading system.¹⁹⁰ For these reasons, the TRIPs transplantation process did not generate the consensus in favour of higher IPR protection standards that some observers had predicted. Instead, as noted by Helfer, it fostered a growing belief, at least in the developing world, that “TRIPs was a hijacked provision” that should be resisted rather than embraced.¹⁹¹

TRIPs Standard: A One-Size-Fits-All Approach?

As Martin Khor points out, while TRIPs has established a new international IPR arena based on the minimum standards in contrast to previous flexibility to afford differentiated protection, no distinction has ever been made to accommodate the varied circumstances of the countries, except for the length of transition periods.¹⁹² Without a natural consistency between IPR and the level of domestic adaptation, enforcement is likely to be sporadic.¹⁹³ It is only when IPR is consistent with social realities that enforcement becomes reliable. Applying a “one-size-fits-all” approach to counties of widely differing stages of development and innovation capacities was not likely to yield the best result.¹⁹⁴ Against this background, critical issues involving creating a new international standard of IPR protection are being discussed.¹⁹⁵ However, before a

¹⁸⁸ Vincent Chiappetta, “TRIP-ping Over Business Method Patents,” 37 *Vanderbilt J. Trans'l L.* 181-2 (2004).

¹⁸⁹ *Ibid.*

¹⁹⁰ *Ibid.*

¹⁹¹ Helfer, *supra* note 71, at 24.

¹⁹² See Martin Khor, “How Intellectual Property Rights Could Work Better for Developing Countries and Poor People,” A Remark at the Conference of the Commission on Intellectual Property Rights, February 21-22, 2002.

¹⁹³ Stefan Kirchanski, “Protection of US Patent Rights in Developing Countries: US Efforts to Enforce Pharmaceutical Patents in Thailand,” 16 *Loy. L.A. Int'l & Comp. L. Rev.* 569, 598 (1994).

¹⁹⁴ *The Political Economy of International Trade Law*, *supra* note 185, 296-327 (where the authors suggest that “there is a dearth of empirical research” on this area because it is probably too early for an assessment; however, “[t]he evidence that does exist suggests that payoffs thus far have been limited at best”).

¹⁹⁵ For example, in February 2003, the United Nations Development Programme (UNDP) released a report entitled “Making Global Trade Work for People.” It provides a critical

new international standard is created in the unpredictable future, it is worthwhile to consider the possibility of choice between different options as a temporary arrangement.

Among developing countries, two groups may be differentiated. The first comprises countries that have legislation which conforms to a considerable degree with international norms.¹⁹⁶ This may be due to the coercive effect of external pressures or the emergence and mobilisation of internal vested interests. In these countries, the level of substantive adjustment required may not be very significant, and may just need updating to reflect new rights such as layout designs of integrated circuits¹⁹⁷ or to tighten enforcement of IPR.¹⁹⁸

A second group comprises those countries where the implementation of TRIPs falls far short of that required, and whose IPR, if they exist, fail to respond to the interests protected by TRIPs. Here there may be increasing structural problems preventing implementation that requires to be resolved. The IPR conceived for these types of countries fail to respond to the kind of questions that were raised and dealt with in developed countries way back through the centuries of their evolutions.¹⁹⁹ Here again how best to proceed may vary considerably in accordance with the level of economic and technological development of the country concerned.²⁰⁰

and valuable counterpoint to the exiting global trade mechanism, stating that the “relevance of TRIPs Agreement is highly questionable for large parts of the developing world.” The report thus concluded that developing nations need to “begin dialogues to replace TRIPs” with “alternate intellectual property paradigms” and, in the interim, to “modify” in any way the agreement is interpreted and implemented. See, Kamal Malhotra, *Making Global Trade Work for People*, UN Development Programme (2003). Another empirical study, “Integrating Intellectual Property Rights and Development Policy – Report of CIPR,” was published in September 2002. This report challenges the dominant principles of TRIPs, asserting that expansion of the IPR may lead to policy failure if differentiated circumstances of developed and developing countries are not taken into account. See “Integrating Intellectual Property Rights and Development Policy,” *supra* note 62, at 13-30.

¹⁹⁶ *The TRIPs Agreement: A Guide for the South, The Uruguay Round Agreement on Trade-Related Intellectual Property Rights*, South Centre, Geneva (1997), at 33.

¹⁹⁷ *Ibid.*

¹⁹⁸ What can be characterised is enforcement procedures mandated by Part III of TRIPs, comprising no less than 20 Articles (Arts 41-61) on the enforcement of IPR.

¹⁹⁹ See, generally, Assafa Endenshaw, *Intellectual Property Policy for Non-Industrial Countries*, Dartmouth (1996), at 98.

²⁰⁰ *The TRIPs Agreement: A Guide for the South*, *supra* note 196, at 34.

2.3 IPR and Development Policy – A Political Analysis

As many scholars and commentators suggest, the history of IPR is best not left to lawyers alone,²⁰¹ but left for a systematic analysis involving an interdisciplinary approach. Up to this point, it is necessary to examine the link between IPR protection and development issues in a political perspective.

2.3.1 Ideology of IPR Protection

In the context of political economy, the international protection of IPR refers, in large part, to the protection between developed and developing countries. As analysed previously, developed countries normally bear the brunt of IPR-related policies, while developing countries are exposed as far more passive, vulnerable and sentimental. Indeed, developing nations are sensitive to the standard of IPR protection set by TRIPs and the tendency to extend this bilaterally. Therefore, these countries maintain that different economic sophistication calls for different level of IPR protection.²⁰² These countries claim that, under the new norms set by TRIPs, something should be done to enable marginalised developing countries to lessen the heavy social cost imposed by the TRIPs standards,²⁰³ and increase the gains accruing from higher international IPR protection.

Different commentators present different ideological and epistemological stances. David Demiray points out that a key motivation behind the introduction of TRIPs was a desire of developed states to protect their accrued competitive technological advantage in the face of the threats and opportunities of globalisation.²⁰⁴ Harmonised IPR regime serves as a powerful political tool enabling trans-national corporations to internationalise the different phases of production without jeopardising IPR protection.²⁰⁵ As noted by Jerome Reichman, the actual objective of TRIPs is merely to establish a global regime

²⁰¹ See, e.g., Christopher May, *A Global Political Economy of Intellectual Property Rights: The New Enclosures?* 11-3 The Routledge (2000) (maintaining that intellectual property is a global political issue).

²⁰² See, e.g., Marci Hamilton, "The TRIPs Agreement: Imperialistic, Outdated, and Over-protective," 29 *Vanderbilt J. of Trans'l L.* 613 (1996); A. Samuel Oddi, "TRIPs - Natural Rights and a 'Polite Form of Economic Imperialism,'" 29 *Vanderbilt J. of Trans'l L.* 415 (1996).

²⁰³ These social costs, in developing nation's point of view, include costs towards attainment of necessary technologies, pursuit of fulfillment of the provision of social measures, and the access to health care and essential medicines. See, e.g., "Integrating Intellectual Property Rights and Development Policy," *supra* note 62.

²⁰⁴ A. David Demiray, "Intellectual Property and the External Power of the European Community: The New Extension," 16 *Mich. J. of Int'l L.* (1995), at 187, 200.

²⁰⁵ Kim Nayer, "Globalisation of Information: Intellectual Property Law Implications," 7(1) *First Monday* (2002).

for proprietary rights regardless of the “anti-competitive effects under this hybrid regime of exclusive property rights proliferating in the developed countries.”²⁰⁶ In this sense, the functional outcome of TRIPs is, to some extent, to consolidate the global hegemony of a few developed nations.²⁰⁷ By challenging the political limits of national sovereignty, TRIPs provisions require that member states provide higher protection for IPR thus providing a point of leverage for developed states to enhance standards under bilateral negotiations which has been viewed “as a drive to overcome pre-existing territorial limitations on intellectual property rights.”²⁰⁸

A case in point is the United States. The percentage value of U.S. intellectual property exports skyrocketed in the second half of the twentieth century, and thus the U.S. was increasingly concerned about the erosion of its competitiveness caused by the widespread “piracy” occurring in developing countries.²⁰⁹ By reducing piracy, the U.S. would “recapture the revenue involved diverting it to enhance profit taking.”²¹⁰

As Kim Nayer points out, assessment of the impact of the international harmonisation of IPR is “a value-laden exercise, partly driven by ideology.”²¹¹ For the bulk of developing countries, adopting a Western-style regime for IPR as an ideal paradigm is not necessarily the most predictable way of bringing visible and tangible benefits to developing countries as promised.

2.3.2 Development-related Aspects for IPR (DRIPs)

While there have long been controversies in the field of international IPR between developing and developed countries, it is perhaps true that the emerging global IPR system, like the “two-edged sword,” comes with dual effect of stimulation and suppression to the society.²¹² As suggested in the Report of the Commission on Intellectual Property Rights (CIPR, UK),²¹³ the crucial issue here is not whether it promotes trade or encourages transfer of technology, as we discussed in the previous sections, but how it fosters or hinders developing

²⁰⁶ Jerome H. Reichman, “From Free Riders to Fair Followers: Global Competition under the TRIPs Agreement,” 29 *N.Y.U. J. Int’l L. & Pol.* 16, 27 (1996).

²⁰⁷ Engle, *supra* note 148, at 215.

²⁰⁸ See Anthony D’Amato and Doris Estelle Long (eds.), *International Intellectual Property Law* 237 (1998).

²⁰⁹ Donald P. Harris, *supra* note 107, at 138.

²¹⁰ *Ibid.*

²¹¹ Nayyer, *supra* note 205.

²¹² Shi, “The Impact of TRIPs on the Protection of Intellectual Property Rights in China,” *supra* note 9, at 58-59.

²¹³ CIPR, *supra* note 62; for a detailed introduction of CIPR, see the official website of the Commission, available at <<http://www.iprcommission.org/>>.

countries in gaining access to technological and cultural resources that they require for their development needs.²¹⁴

IPR rules are fundamentally associated with the attainment of sustainable development. They can influence the technology dissemination between the developed and developing world, impact the control that communities have over their traditional knowledge, and affect the access to medicines.²¹⁵ The TRIPs Agreement is also seen as an attempt to develop a new frontier for patent protection towards life forms and biological materials that has given rise to concerns over the impact of genetically modified organisms on the environment, basic food and public health, traditional knowledge, and biodiversity management. In this connection, IPR internationalisation will inevitably require domestic adaptation. Thus developing countries may implement the TRIPs Agreement in accordance with their own legal system, taking into account public interests as well as the overall community development.

While the role of the TRIPs Agreement in the global trading system is controversial, we are by no means pessimists towards the future of the WTO. It is our expectation, however, that the WTO is to be refocused on its long-term mission to tackle poverty and difference, and sustainable development reflects a prominent element of that mission. For example, according to the principles of the WTO, the trading system “should be more accommodating for less developed countries, giving them more time to adjust, greater flexibility, and more privileges.”²¹⁶

Sustainable Development

Sustainable development is “a two-word phrase with a thousand meanings.”²¹⁷ It focuses on whole systems, long range planning, and front-end solutions, and seeks out partnerships between government, business as well as community and private sectors.²¹⁸ In doing so it encompasses, and opens to debate other vital issues such as human development, social justice, and promotion of democracy.²¹⁹

The principle components of sustainable development emerged at the 1972 United Nations Conference on the Human Environment in Stockholm, Swe-

²¹⁴ See “Integrating Intellectual Property Rights and Development Policy,” *supra* note 62, Chapter 1.

²¹⁵ “Addendum to Accreditation of Non-governmental Organisation,” Standing Committee on the Law of Patents, Tenth Session, Geneva, May 10 to 14, 2004, World Intellectual Property Organisation, Geneva, available at <http://www.wipo.int/edocs/mdocs/scp/en/scp10/scp_10_7_add-annex1.pdf>.

²¹⁶ Principles of the trading system, Understanding the WTO, *supra* note 7, Chapter 1.

²¹⁷ Douglas R. Porter, *et al*, *The Practice of Sustainable Development*, Urban Land Institute 1-3 (2000).

²¹⁸ *Ibid.*

²¹⁹ *Ibid.*

den.²²⁰ The central themes of the conference included the interdependence of human beings and the natural environment, the interactions between economic growth and social, environmental protection development.²²¹

The most extensive examination of the relationship between sustainable development and IPR has been the Report of CIPR entitled “Integrating Intellectual Property Rights and Development Policy.”²²² The Commission concluded that “development objectives needed to be integrated into the making of policy on IPR, both nationally and internationally and the report details both how national IPR regimes could best be designed to benefit developing countries within the context of international agreements, including TRIPs and also how the international regime itself might be beneficially developed.”²²³ In particular, it suggested broadening the contextual framework within which IPR is normally considered so as to include complementary regulation such as controlling anti-competitive practices through competition policy and law.²²⁴

In light of sustainable development, the implementation of TRIPs without adequate flexibility may limit the freedom of the developing members to shape their IPR strategies in accordance with their socio-economic conditions and ultimately impedes development.²²⁵ From this perspective, sustainable development and intellectual property are intimately connected, particularly in the context of the Doha Development Agenda,²²⁶ which highlights the expected contribution of trade towards achieving sustainable development.

Economic, Environmental and Social Development

Both economic development and economic growth have close lineage with sustainable development. Growth refers to getting *bigger* – a quantitative increase, and development refers to getting *better* – a qualitative change.²²⁷ In an effort to facilitate economic development, a community should have to pursue growth at some point in the development. However it also has to allocate the benefits of growth to the ends of development rather than enriching domestic vested interests. In this regard, free trade undermines the grip of local monopolies operating on government license, but does the TRIPs agreement

²²⁰ Shanna L. Halpern, “The United Nations, Conference on Environment and Development: Process and Documentation,” *available at* <www.ciesin.org/docs/008-585/unced-intro.html>.

²²¹ Porter, *et al*, *supra* note 216, at 1-3.

²²² “Integrating Intellectual Property Rights and Development Policy,” *supra* note 62.

²²³ *Ibid*.

²²⁴ *Ibid*, preface, at iii-iv.

²²⁵ *See, A Guide for the South*, *supra* note 196, at 33.

²²⁶ *See infra* Chapter § 5.4.2.

²²⁷ Ralph Nader and Jerry Brown, *The Case Against Free Trade: GATT, NAFTA, and the Globalization of Corporate Power*, North Atlantic 132 (1993)(illustrating that growth is “quantitative increase in physical size” whereas development is “qualitative change, realisation of potentialities, transition to a fuller or better state”).

merely replace internal monopolies with external ones? Economic development requires not only an increase in wealth, but increased diversity in its allocation and attention to the quality of the consequences.

Need for Basic Food and Public Health

As noted by some commentators, the universal protection of IPR under the TRIPs Agreement “presents a paradox in that it runs against the basic tenets of liberalisation and favours monopoly restriction.”²²⁸ Within the global IPR regime, abuse of the monopoly power may lead to undesirable or even disastrous social consequences if such essential matters as human health or access to food were “held hostage.”²²⁹ Here the problem is ensuring that the monopoly protection afforded by IPR facilitate rather than impede the progressive realisation of the rights to food, health, and access to information that contribute to human welfare. There is a growing concern that the strength of industry influence over developed state policy positions on IPR, undermines the safeguarding of other rights, which have less prominence in the domestic politics of developed states, but are crucial to the policy priorities of developing states.

Traditional Knowledge

Traditional knowledge, also known as indigenous knowledge, generally refers to the matured long-standing traditions and practices of regional, indigenous, or local communities passed down through generations.²³⁰ The fact that the current global IPR regime was set by developed countries has also led to gaps in the range of rights protected. Some of these omissions, most notably traditional knowledge, have emerged into the Doha Development Agenda as examples of abuse. For instance, traditional knowledge as to the medicinal use of particular plants is vulnerable to misappropriation by being decontextualised and refined into basic fundamental processes, which can then be patented notwithstanding generations of indigenous use.²³¹ This has led to the current regime being criticised as it allows “arrogant, cash-rich, resources-poor northern nations to solidify their economic position at the expenses of naïve, cash-

²²⁸ J. Oloka-Onyango & D. Udagama, “Health Intellectual Property & Human Right,” in *WTO Needs Re-orientation*, South Centre Publication, South Bulletin - 19, August 30, 2001, at 3-4 (asserting that “the protection of IPR under TRIPs presents a paradox for international economic law”).

²²⁹ Chakravarthi Raghavan, “Ensure More Definitive Rendering of TRIPs Exceptions, Say Jurists,” *TWN Third World Network*, available at <<http://www.twinside.org.sg/title/jrists.htm>>, last accessed September 29, 2006.

²³⁰ See Graham Dutfield, *Intellectual Property, Biogenetic Resources and Traditional Knowledge*, Earthscan Publications 91-9 (2004).

²³¹ *Ibid.*, at 3, 185-6.

poor, resource-rich southern states.”²³² Various initiatives have been undertaken to provide greater protection to traditional knowledge and cultural continuity, although there remains a tension as to whether traditional knowledge should be developed into a protected right itself.²³³ Some countries require patent applications to acknowledge any reliance on traditional knowledge.²³⁴ Alternatively schemes to codify and publish traditional knowledge to ensure they are recognised as forming part of the public domain, thereby denying novelty to any related application still leaves traditional knowledge open to commercial exploitation. Though still controversial, there seems little doubt that a sovereign state can “fashion a valuable bargaining chip” by prioritising specialised local traditional knowledge about the identity and preservation of various plant genetic resources.²³⁵

Biodiversity Management

“Biodiversity”²³⁶ is also an important concern in two respects. First, certain developing countries may have comparative advantage in the quality of particular strains of crops that they need to protect from genetic piracy.²³⁷ Second, the marketing of highly effective strains of crops, under strong IPR, can lead to intensive agriculture based on monocultures thereby causing a world-wide decrease in biodiversity, and also a pricing out of low income access to traditional crop species. This is of significant importance because biodiversity management has traditionally provided the options to maintain habitats and sustain ecosystems.

2.3.3 Diplomacy in the IPR Protection

Deal from “Overdraw” - Coerced Concessions

Notwithstanding the numerous international conventions, and related specialised organisations to which reference has already been made, the TRIPs Agreement is enforceable within the framework of the WTO, “a forum lacking

²³² Scott Holwick, “Developing Nations and the Agreement on Trade-Related Aspects of Intellectual Property Rights,” 49 *Colo. J. Int’l Envtl. L. & Pol’y* 53 (1999).

²³³ Dutfield, *supra* note 230, at 127-136.

²³⁴ See “Article 27.3b, Traditional Knowledge, Biodiversity, WTO Members’ Documents,” available at <www.wto.org/English/tratop_e/trips_e/art27_3b_e.htm>.

²³⁵ Jerome H. Reichman, “The TRIPs Agreement Comes of Age: Conflict or Cooperation with the Developing Countries?” 32 *Case W. Res. J. Int’l L.* (2000), at 441-446.

²³⁶ “Biodiversity” is usually described as an umbrella term for the diversity in ecosystems, species and genes. It represents, literally, all living plants and animals including humankind. For a comprehensive account, see Kevin Gaston, John Spicer, *Biodiversity: An Introduction*, Blackwell Science (2003), at 4.

²³⁷ Dutfield, *supra* note 230, at 52-6.

a tradition of work in the field of IPR.”²³⁸ As Carlos Correa has pointed out, the “TRIPs Agreement was not merely conceived as a mechanism to combat counterfeiting and piracy, an objective that most developing countries would have shared,”²³⁹ but “as a balance of different interests representing different groups.”²⁴⁰ As commonly argued by developing countries, “the process of drafting the TRIPs Agreement can hardly be considered to have been a real ‘negotiating’ process, as developing countries made considerable concessions in agreeing to the higher levels of protection of IPR demanded by industrialised countries,”²⁴¹ and “the TRIPs Agreement itself has built-in asymmetries.”²⁴² In addition, developing countries were particularly vulnerable having stretched to the limit of their negotiating capacity.²⁴³ Unsurprisingly, the negotiating position of developing countries was almost always passive and defensive, since these countries lacked not only the necessary access to information but also the exports who understood the game of global trade.²⁴⁴

Offer by “Top-up” – Deserved Compensation

As has been noted, TRIPs is largely suitable for and beneficial to certain group of people as technology exporters, largely ignoring the disadvantages of the technology consumers, “and it overlooks many such forms that exist in the countries of the South.”²⁴⁵ In other words, TRIPs is unbalanced in its orientation. Accordingly, there is considerable doubt as to whether developing countries could overcome the inherent incompatibility of the IPR system with their indigenous conditions merely through a process of adaptation or adoption of that system.²⁴⁶ Indeed, it is neither reasonable nor sustainable to set forth a same standard for two nations at different stages of development. Figuratively, they are “boxers” from different “heavyweight division.” This gives credence to the view that the interests of developing countries would best be served by rejecting the international IPR system as inapplicable until they can pass through the necessary stage of industrialisation and scientific and technologi-

²³⁸ *The TRIPs Agreement: A Guide for the South*, *supra* note 196, at 6-7.

²³⁹ *Ibid.*

²⁴⁰ Percy F. Makombe, “Are We Embarking on Disastrous TRIPs? A case for TRIPs Review,” *SEATINI Bulletins*, available at <<http://www.seatini.org/bulletins/>>.

²⁴¹ *The TRIPs Agreement: A Guide for the South*, *supra* note 196, at 7.

²⁴² *Ibid.*, at 10.

²⁴³ *Ibid.*, at 8-9.

²⁴⁴ *Ibid.* See, also Carlos M. Correa, *Intellectual Property Right, the WTO and Developing Countries-The TRIPs Agreement And Policy Options* 5 (2000).

²⁴⁵ Alan Story, “Burn Berne: Why the Leading International Copyright. Convention Must be Repealed,” 40 *Univ. Houston L. Rev.* 793 (2003)(mentioning that Berne Convention as a major international copyright treaty is “unbalanced and lopsided in its orientation”).

²⁴⁶ Correa, *supra* note 146, at 5.

cal advance,²⁴⁷ however these developing countries cannot afford to be isolated within the existing global trade system.

Since the TRIPs Agreement as a “service package” has been accepted by the international community, it appears unrealistic to unwind the TRIPs norms at present and in the foreseeable future. Any bargaining mode between developed and developing countries can only be conceived and implemented within the existing TRIPs framework. It seems true that to require developing countries to adopt the higher standard without reasonable concessions, reducing tariffs for instance, would be just an official line of developed countries. The most practical policy is to provide with more technical support to those developing states that have made firm commitment to implementation of TRIPs minimum standards. Developed countries could in turn “go a long way towards raising enthusiasm for TRIPs if they would actively implement their ‘best efforts’ commitments to encourage technology transfer to the least developed countries and to provide technical and financial assistance for developing countries.”²⁴⁸ As noted by Lai and Qiu, developed nations should compensate developing nations in an appropriate way and on a reasonable scale as a price for the promotion and harmonisation of the IPR standard.²⁴⁹ If the extra surplus generated from strengthened IPR protection benefited developed nations solely, developing countries should under no circumstances have implemented and enforced the IPR willingly.²⁵⁰

In the meantime, developing countries may continue to leverage all possible flexibility within present TRIPs structure before the necessary revision of the agreement were to be made. Developing countries are advised to “operate at the lower limits” of the TRIPs standard.²⁵¹ In addition, the fact that the TRIPs is subject to periodic review gives developing countries the opportunity to coordinate their negotiation positions, taking into account their own development objectives. Making full use of this flexibility to find a dynamic balancing of interests will be beneficial not only to developing nations, but also, in the long term, to developed nations.

²⁴⁷ See generally, Assafa Endenshaw, *supra* note 199, at 116.

²⁴⁸ See “Intellectual Property: Balancing Incentives with Competitive Access,” *Global Economic Prospects*, World Bank 147 (2002).

²⁴⁹ Lai and Qiu, “the North’s Intellectual Property Rights Standard for the South?” *supra* note 45, at 199, 203 (demonstrating, “[t]o make the TRIPs Agreement incentive-compatible for the South, the North, which is the beneficiary region, has to compensate the South[,] for its increase in IPR protection”).

²⁵⁰ *Ibid.*, at 203.

²⁵¹ “Intellectual Property: Balancing Incentives with Competitive Access,” *supra* note 248, at 147.

Exploring the “Grey Area” – Feasible Solutions

The TRIPs Agreement is an integral part of the WTO Agreements involving *inter alia* some degree of “grey area” of implementation. Although members of the agreement have to implement the requirements of TRIPs in good faith, some crucial areas of the TRIPs appear to leave reasonable flexibility for domestic interpretation.²⁵² In addition, some TRIPs provisions serve as an apparatus for determining the scope of content of national legislation.²⁵³ While the TRIPs Agreement sets forth minimum standards, it provides such flexibility in a number of areas and developing countries should be afforded the opportunity to “operate at the lower limits.”²⁵⁴ This may take relieve some of the tension between developed and developing world.

TRANSITION PERIODS

In light of the budgetary and institutional aspects of standardisation, “least-developed countries should be afforded latitude in exercising delays in implementation of TRIPs,” especially in the politically sensitive and technically complex areas such as pharmaceutical protection in the developing world.²⁵⁵ The feasible option is to tailor the current IPR regime to the characteristics in each country. At the moment developing and the less-developed countries have each been granted transition periods in which to adapt to and fit in with the harmonised standards. A further extension can also be granted by the WTO Council for TRIPs.²⁵⁶

COMPULSORY LICENSING

Second, developing countries are entitled to grant compulsory licensing (CL) to ensure medicines and other essential goods and services are available and affordable to the society. CL is a useful and suitable mechanism for developing countries to take advantages of policy options and to safeguard public interests relating “other use without authorisation of the right holder.”²⁵⁷

²⁵² *The TRIPs Agreement: A Guide for the South*, *supra* note 196, at 26.

²⁵³ *Ibid.*, at 61.

²⁵⁴ See “Intellectual Property: Balancing Incentives with Competitive Access,” *Global Economic Prospects*, *supra* note 248, at 147.

²⁵⁵ *Ibid.*

²⁵⁶ See TRIPs Agreement Article 66.1 (which stipulates that “[i]n view of the special needs and requirements of least-developed country Members, their economic, financial and administrative constraints, and their need for flexibility to create a viable technological base, such Members shall not be required to apply the provisions of this Agreement, other than Articles 3, 4 and 5, for a period of 10 years from the date of application as defined under paragraph 1 of Article 65. The Council for TRIPS shall, upon duly motivated request by a least-developed country Member, accord extensions of this period”).

²⁵⁷ See TRIPs, Article 31.

In Doha Ministerial Conference (DMC), where the Declaration on TRIPs and Public Health in Doha (DTPH) was adopted, Ministers reached a consensus that “each WTO Member has the right to grant compulsory licences and the freedom to determine the grounds upon which such licences are granted.”²⁵⁸ This Article allows members to “decide the grounds, which warrant issue of a CL,”²⁵⁹ although WTO members are obliged to keep in line with the terms and conditions of Article 31 of TRIPs in formulating these grounds, and providing efficient and equitable procedures for granting such licences.²⁶⁰

Further to this point, the DTPH clarifies the “national emergency” or “other circumstances of extreme urgency” where, under the TRIPs Agreement, limitations can be waived and a CL can be issued to address these “emergency” or “urgency,” such as HIV/AIDS. Fast-track procedures are available for developing or less-developed states suffering such “emergency” or “urgency.”²⁶¹ In such cases affected states can issue a CL without a licence agreement being finalised in the first instance.²⁶²

These clarifications of DTPH provide reasonable flexibility by which governments in developing countries can legislate public health measures sufficient to use CL for expanding access to patented medicines at reasonable cost either when they are in short supply or only available at an unaffordable price. This also allows domestic industry to develop by meeting the demand whilst at the same time recognising the proprietary interests of the patent holder. However, the wording permitting compulsory licensing is still somewhat difficult to operate in practice and there are specified conditions to be filled.²⁶³

SPECIAL AND DIFFERENTIAL TREATMENT

There has been a significant controversy over the role of IPR in modern society.²⁶⁴ As stated in the Report of CIPR, the TRIPs provisions “should not be

²⁵⁸ “Declaration on the TRIPs Agreement and Public Health,” adopted on November 14, 2001, Article 5 (C).

²⁵⁹ C. Rammanohar Reddy, “Technology Policy Issues at the WTO,” 1 (1) *Technology Policy Briefs* 3 (2002).

²⁶⁰ “TRIPs in the Context of the Doha Ministerial Declaration,” Speech by Paul Vandoren, Head of Unit for New Technologies, Intellectual Property, Public Procurement DG Trade, January 6, 2002.

²⁶¹ See “Implementation of Paragraph 6 of the Doha Declaration on the TRIPs Agreement and Public Health,” Decision of the General Council of 30 August 2003, available at <http://www.wto.org/English/tratop_e/trips_e/implem_para6_e.htm>.

²⁶² See TRIPs Article 31(b).

²⁶³ See Lord Sydney Templeman, 1 (4) “Intellectual Property,” *J. Int’l Econ. L.* (1998), at 603-606.

²⁶⁴ See, e.g., Ricardo Meléndez-Ortiz and Ali Dehlavi, “Sustainable Development and Environmental Policy Objectives: A Case for Updating Special and Differential Treatment in the WTO,” *ICTSD Publication*, available at <<http://www.ictsd.org>> (suggesting that, “the notion of development embedded in the international trade system, including the multilateral regime of the WTO and the regional integration schemes which are increas-

pressed on developing countries without a serious and objective assessment of their development impact.”²⁶⁵ “In the majority of developing countries there is considerable dependence on technical assistance, [...]. Thus, because the policymaking process is complex and technical, governments may seek to short circuit the process, particularly in the face of international agreed deadlines.”²⁶⁶

One approach to ameliorating the problem is to draw on the entitlement to special and differential treatment.²⁶⁷ Developing states accept and implement provisions at a time they can afford – ordinarily this means that the developed world offers flexibility and subsidise the developing world on a temporary basis. As has been noted, “[f]lexibility as to when developing countries should assume WTO obligations reflects an appreciation of the adjustment costs of change as well as administrative and infrastructural capacity needs that might be associated with implementation.”²⁶⁸

2.4 Conclusion

Conventional perceptions from economic perspective tend to believe that a strengthened IPR regime annexed to the WTO is a propeller of economic growth. However, since the establishment of the global trading system, it still remains controversial as to whether and how the introduction of the international IPR regime and its infrastructure would generate significant economic growth as originally expected. Developing countries accepted TRIPs agreement with various policy goals. However, the new regime is asymmetric in the sense that it mainly benefits industrialised countries. IPR can either trigger or stifle innovation, and can either promote or hinder economic growth, depending on different national circumstances. Evidence also shows that the full in-

ingly subjected to GATT principles and rules, is anachronistic and has proven to be delusive and ineffective. The ‘transit period’ and ‘special and differential’ treatment are among their target”).

²⁶⁵ “Integrating Intellectual Property Rights and Development Policy,” *supra* note 62, at v-vi.

²⁶⁶ *Ibid*, at 154.

²⁶⁷ The Special and Differential Treatment is designed as a mechanism that enables developing and less-developed countries to integrate in the global trading system with reasonable flexibility. See “Work on Special and Differential Provisions,” in *Development: Trade and Development Committee*, WTO, available at <www.wto.org/english/tra-top_e/devel_e/dev_special_differential_provisions_e.htm>.

²⁶⁸ See “Special and Differential Treatment in the WTO: Why, When and How?” Staff Working Paper ERSD-2004-03, May, 2004, WTO Economic Research and Statistics Division, available at <http://www.wto.org/english/res_e/reser_e/ersd200403_e.doc>, at 30.

teraction between stronger IPR protection and higher-level technology transfer remains untested.

From a legal perspective, concern remains about the ‘universal’ standard of harmonisation which lacks flexibility for developing countries. In a comparative law context, legal transplants of foreign countries have proved practicable over the past decades in some developing countries, but a “fitting-in” process is usually essential to ensure effectiveness of a transplanted law in a unique socioeconomic environment. While legal transplants are feasible, cultural adaptation is essential. In the arena of world intellectual property, intellectual property law has posed as a radically new form of legal transplant in developing countries since it usually has no counterpart in the indigenous legal traditions. However, the success of transplanted IPR infrastructure depends largely on how indigenous tradition of that imported law is remade in the image of its original model. This reception process in launching a brand-new legal system is, to a great extent, a process of indigenisation of the foreign law, and this process cannot be simplified when a cultural gap is significant.

In the context of political economy, the TRIPs Agreement represents a successful culmination of several attempts by developed states to consolidate their monopoly position over the global economy. The role of developing states within the TRIPs regime has been vulnerable and the concessions they have made should be enumerated in appropriate ways, such as providing financial aid and offering technical assistance.

Based on the theoretical ground, we will use the prism of EU-China trade relations to suggest ways to reconcile the minimum standards imposed by international IPR regime and the specific conditions of particular states, and provide insight into the unresolved issues. To achieve this goal, we need to assess Chinese response to the TRIPs agreement and the shortcomings of the IPR enforcement, which are what will be discussed in the following chapter.

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