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Intellectual Property Rights: A Comparative Perspective on Asia, the EU, and North America

David McHardy Reid*

Abstract

This article explores some of the key differences in conditions, procedures, and interests among major trading blocs and selected countries within them. Its primary focus is on the challenges faced by an intellectual property (IP) regime, especially related to IP protection. In the Asian context, consideration is given to the status and challenge of IP protection in Indonesia, and, for contrast, Japan, with its singular history of IP acquisition. Hong Kong, a Special Administrative Region of China, is considered separately as is part of the People's Republic of China. Then the EU and the United States are addressed. In addition, the divergence of interests between net technology-consuming economies (NTCEs) and net technology-producing economies (NTPEs) are considered.

Keywords: intellectual property, intellectual property protection, counterfeiting, piracy, divergent IP interests, IP environment

Resumen

Este artículo explora algunas de las diferencias fundamentales en las condiciones, procedimientos e intereses entre los bloques comerciales más importantes y algunos países que forman parte de éstos. Se centra principalmente en los desafíos que enfrenta el régimen de la propiedad intelectual (PI), particularmente en lo que concierne a su protección. En el contexto asiático se considera la situación y el desafío que representa la protección de la PI en Indonesia, en comparación con Japón, con su historia única respecto a la adquisición de PI, o bien de Hong Kong, una región administrativa especial de China, la cual se ve de manera independiente, aunque sea parte de la República Popular de China. Además, se aborda la situación de la Unión Europea y de Estados Unidos, así como la diferencia de intereses entre las economías consumidoras de tecnología (NTCEs, por sus siglas en inglés) y las productoras de tecnología (NTPEs, por sus siglas en inglés).

Palabras clave: propiedad intelectual, protección a la propiedad intelectual, falsificación, piratería, intereses divergentes en propiedad intelectual, propiedad intelectual y medio ambiente

* Professor of global business strategy at the Seattle University Albers School of Business and Economics. reidd@seattleu.edu. The author wishes to express his gratitude to the Friedrich Ebert Stiftung Foundation in Mexico and the CISAN for their support.

Introduction

This article sets out to compare and contrast the intellectual property rights (IPRs) environment in Asia, the European Union, and North America. This is a very large and complex issue. IP has intrinsic and potentially verifiable value. It provides a firm with a competitive edge and enables it to differentiate itself from its competitors. Yet, loss of IP is one of the major risks companies can expect to encounter while doing business in a global economy, especially in locales where there is less developed respect for IPR law. And, as Baer (1995) puts it, ideas do not exist in a vacuum; ultimately, they are made into products and services when material and intellectual property become one. For this reason, the U.S. Council for International Business urges developing countries in particular to increase IPR enforcement, which is critical to the attraction of foreign investment. A country with poor IPR protection deters foreign technology investments (Kamalick, 2006).

IPRs apply to many different situations and protective rights may be applied to different factors such as patented technology or image, etc. For example, in the music business, rights for synchronization of voice with image exist, and in that context these are valuable assets. I shall, however, attempt to remain more abstract without being distracted by such detail. After a brief introduction to the importance of IPRs, I will proceed to scrutinize the IP environments of Asia, the EU, and North America, each in turn. The section on Asia is much longer than those on the EU and North America. This is for two reasons, beyond being commensurate with its geographical scale and huge population. First, Japan, the world's third biggest economy, was built on the acquisition of IP, on favorable terms, from the United States. Second, China is at the core of the challenge to the integrity of the IP system in the world today. Much of what is happening in North America and the EU is reactive to China.

Background

Taking a geopolitical perspective, McNabb (2006) maintains that IPRs should be at the core of international stability calculations. After the demise of bipolarity with the collapse of the Soviet Union, he maintains that at least two significant impediments remain to creating a more secure, cooperative, and prosperous global system. One involves miscalculations on the part of the West. The other is a fundamental misunderstanding in Moscow and Beijing regarding the nature of success inherent in liberal democracies and market economies.

McNabb (2006) explains that a policy that requires irrationality on the part of decision makers in the developing world is prone to suboptimal outcomes and hints

that chaos and conflict may result. Moreover, leaders in the former Soviet Union and Beijing, he suggests, misunderstand the most important dimensions of long-term Western success, one of which is secure intellectual property rights. IPRs create the incentives for innovation, creativity, and technical change. Institutionalizing the rule of law and securing private property rights protect entrepreneurs as they take risks in order to make economic gains. If secure private property rights had not been institutionalized in Europe and the United States for the past 300 years, incentives for innovation and creativity would have been reduced, as would overall economic productivity.

"I feel as though my name and my works have been hijacked, against my wishes, for the personal gain and profit of others and diverted from the charities I intended to benefit," said J. K. Rowling, author of the Harry Potter series, in a statement to a court where she was the primary plaintiff in an action against RDR Books, a small book publisher based in Michigan. RDR Books had planned to publish a book by Steven Vander Ark, who maintains a fans' website called the Harry Potter Lexicon. The Lexicon is a Harry Potter encyclopedia for obsessive fans (Nocera, 2005). She is essentially claiming that the decision to allow a Harry Potter encyclopedia to exist is hers alone, since the characters in her books are her *intellectual property*. And in her view, no one else can use them without her permission. As Nocera (2005) explains, IPRs are being used in the opposite way to which they were intended. Instead of being a spur to creativity, they have become a brake. Copyright holders, for example, attempt to impose rules through threats and litigation that were never intended to be part of copyright law. Music artists sue to prevent others from taking samples of copyrighted songs to create their own music. And authors' estates try to deprive scholars of their ability to reprint parts of books or articles because they disapprove of the scholar's perspective.

Nevertheless, ensuring that IPRs are protected remains a challenge. Foreign companies, Fishman (2005) outlines, lose control of their goods in two related ways: through counterfeiters, who copy products and then sell them under different or altered brand names; and through pirates, who make look-alikes and try to pass them off as the real thing. Of the different types of transgression, piracy is most common. Patent infringement represents another common type of transgression. Unfortunately, patent infringement often pays off for the infringer —a longstanding, worldwide phenomenon. Typically those who infringe, if caught, end up paying what they would have paid if they had originally negotiated a license. So there is little incentive in the system to encourage compliance (Arai, 2000).

Following this brief background we move to explore the environments in different territories beginning with Asia. The main focus in the Asia section is on Japan and China. This is because the acquisition of IP by Japan from the U.S. was a significant

driver for its economic resurgence. And as we will also see, the misappropriation of IP by China will remain a sensitive topic for the foreseeable future.

Asia

Asia is a huge territory, covering 30 percent of the world's land area, and, with over 4 billion people, comprising more than 60 percent of the world's population. It is varied and culturally diverse so for this article, I will touch on only some of the key markets as they relate to IP.

Commonly, Asia is seen as having less respect for IP than is the case in Europe and the U.S. However, MacDonald and Turpin (2007) argue that, though in theory, small and medium firms have much to gain from the intellectual property rights system, in practice, small and medium-sized enterprises (SMEs) have trouble using the IPR system. Yet SMEs in Asia and the rest of the developing world are encouraged by the developed to look to IPRs to become more innovative and hence competitive. For them, copying may be a more appropriate and successful form of technology transfer than licensing IPRs from developed countries. Ultimately, though, the East-West IP divide will diminish to the benefit of both (Sanders, 2006). Citing the US$100 million-plus cross-licensing agreement between Creative Technology of Singapore and Apple Inc. to settle a long-running IP dispute, Sanders (2006) maintains this not only to be a great business opportunity for the two companies, but also an example of rising global demand for Asian IP.

Moreover, as Asian enterprises increasingly invest in IP protection and compliance and intellectual property management, the mutual respect and awareness that East and West need to continue to develop becomes entrenched in respective business practices. This, in turn, supports an increasingly global enterprise willingness to share and protect IP assets. However, that is the theory, and the theory does not always find fertile pastures in which to flourish. Indonesia is perhaps at the low end of the IPR fertility spectrum.

Indonesia

While it is popular to cite China and Thailand as major centers of counterfeiting and for their lack of respect for IP generally, trademark owners have achieved some success in protecting even unconventional trademarks in Thailand. But even lost fights have encouraged Thailand's trademark regime to evolve and modernize (Indananda

and Kanchanapairoj, 2009). With its population of almost 240 million, Indonesia is, despite top-line legislation, a hotbed of IP infringement. Not surprisingly, in the light of this high infringement level, it does not have much of the necessary infringement protection machinery in place.

Nevertheless, since 1998, Indonesia has significantly reformed its intellectual property laws to meet international expectations. For example, in 2000, Plant Varieties, Trade Secrets, Industrial Designs, and Circuit Layout Laws were passed. The following year, the People's Representative Council replaced Indonesia's Patents and Trademark Laws. A new Copyright Law was passed in 2002, coming into force one year later according to Butt and Lindsey (2005). These new laws bring Indonesia's intellectual property regime in line with many of the minimum standards of substantive intellectual property law required under Part II of the World Trade Organization's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).

The new legislation also introduces the civil enforcement mechanisms and criminal penalties required by Part III of the TRIPS Agreement. Butt and Lindsey (2005) claim that these enforcement provisions have only rarely been used, however, with the result that Indonesia's new intellectual property legislation has had little practical effect. Actually, infringements appear to have increased since the reforms. Optical media are perhaps the most conspicuous of Indonesia's many pirate industries. The International Intellectual Property Alliance (IIPA) estimates that 92 percent of movies, 80 percent of music recordings, and 87 percent of business software sold in Indonesia is pirated, causing a combined loss of US$203.6 million to United States right-holders in 2004. However, this loss figure is somewhat tendentious, as the argument can be made that unrealized revenues do not equate to losses.

The IIPA also reports very high levels of entertainment software infringement and claims that piracy is now crippling Indonesia's domestic music industry. Indeed, Indonesia's Sound Recording Industry Association (Asiri) estimates that ten pirated versions were sold for each original recording sold in 2002, equating to 17 trillion rupiah (US$1.8 billion) in losses (unrealized revenues) for the domestic recording industry. Some popular music groups have seemingly refused to write new songs, claiming that they lose too much income to counterfeiters. Trademark piracy is also rampant, with fake goods widely available at almost every public market and mall in the country, and, Butt and Lindsey (2005) observe, even in kiosks at the main office of the Directorate General of Intellectual Property.

Apparently most Indonesian judges are not interested in making the rules on injunctions function in intellectual property cases. They believe them to be impractical in the Indonesian context. Often judges reckon that intellectual property law is not in Indonesia's best interests at its current level of development. Judges are also

poorly remunerated (Bedner, 2001) and rely on bribes to support their incomes. A number of powerful arguments support this view that IPR law is not in Indonesia's interest, and these views permeate Indonesian legal circles. Indonesia has relatively few domestic intellectual property producers who would benefit from increased intellectual property enforcement efforts. Therefore, the loss is greater than the gain, there being an understandable perception that a strong intellectual property regime in Indonesia would only further the interests of those who own most of the world's intellectual property. And they are based in developed countries (Butt and Lindsey, 2005).

Increased prices that will derive from more effective enforcement will make intellectual property-rich products unaffordable for all but a small portion of the population. These products range from pharmaceuticals to blockbuster movies and music. Third, the likely closure of pirate industries with increased enforcement would immediately, Butt and Lindsey (2005) claim, exacerbate already high unemployment rates. In this context, there is a widespread perception that improved protection would prevent unskilled workers from doing what is necessary to feed their families where there are very few alternative sources of income. In addition, there is a perceived injustice in that there is no visible "victim" of infringement, the impact falling on foreigners and remote corporations.

Organizations that deal with IP infringement policing in Indonesia, the best known of which is Yayasan Karya Cipta Indonesia (YCKI), have little political clout and are no match for the strong, well-organized piracy syndicates and the resistance to effective enforcement by the legal system. Rather, the YCKI's local credibility has been significantly undermined because a large portion of the royalties it collects is distributed to non-nationals. Furthermore, because copyright law is foreign to most Indonesians, many of the people from whom YCKI collects money believe the payments to be extortive. This combination of entitlement with the existence of Mafia-style institutions running the counterfeit business renders the IP environment a tough one to survive in. These kinds of mafias, it is worth noting, underpin the piracy industry across and beyond Asia.

Having alluded to the flavor of attitudes toward IP at the low end of the spectrum we now explore the high end, as in Japan.

Japan

Japan incurs IP losses of around US$34 billion per annum due to piracy and counterfeiting (Fishman, 2005). Japan is undoubtedly at the most sophisticated end of the spectrum among Asian countries and economies. What is not commonly recognized

is that it owes this status to having acquired U.S. IP following the World War II. This is explained by Ajemian and Reid (2010), on whom this Japan section draws heavily. Given that Japan remains the world's third largest economy, the role of IP in this scenario makes for a relatively long section.

Before World War II, Japan had observed the colonization of China by Western powers. It then built its own empire in Asia believing that this would prevent it from suffering the same fate as China. The vision and drive of Japan's leadership enabled it to modernize at a lightening pace. Eventually, it clashed with the United States over control of the Pacific in the eastern theater of WWII. Along with those of its European allies, Germany and Italy, Japan's economy was destroyed. It was occupied by the United States, which was faced with reconstructing every country that had participated in the war. Technology would play a very large role in the success and speed of those efforts.

U.S. Containment Strategy

Emerging from WWII as a hegemonic force, the United States found itself facing a formidable adversary in the Soviet Union (Pyle, 2007: 210). U.S. policy leaders pursued a policy of containment. In its earliest form, containment held that the combined military forces of the United States and its allies, massive as they were, could not quickly or decisively defeat those of the Soviet Union and its more numerous Bloc countries. Therefore, U.S. policy would be to politically isolate the Soviet Union and contain any political or military expansion by the Soviet Union anywhere in the world until it collapsed from isolation. The goal, military advisor and diplomat George Kennan, known as the "father of containment," averred, was "a policy of firm containment, designed to confront the Russians with unalterable counter-force at every point where they show signs of encroaching upon the interests of a peaceful and stable world" (Isaacson and Thomas, 1986: 384).

To carry out the strategy, the United States would need to create a strong alliance of anti-Soviet countries that would remain intact over time. The alliance would require both economic and military leadership, which the United States provided in what became a highly organized system of international public goods (Makin, 1989: 16-17). The U.S. postwar international system consisted of aid to rebuild Europe (the Marshall Plan) and, to a lesser degree, Japan (Makin, 1989: 18), a vibrant international system of free trade complete with various international development banks that would allow countries to rebuild and prosper (Bretton Woods), and military alliances to give containment credibility (Pyle, 2007: 215).

Bretton Woods and Free Trade

A crucial assumption of postwar policy-makers was that the faltering of capitalism, which resulted from isolated and hostile trading blocs, had played a central role in causing WWII. To prevent this from happening again, in 1945, the United States created the Bretton Woods system of stable international finance to promote free trade and avoid isolation (Pyle, 2007: 211-213). Ironically, the free-market system would also be used later in the Cold War against the Soviets to isolate it. By keeping its markets open to non-Soviet countries, which would hasten the rebuilding and development of their economies, free-market capitalism would quickly demonstrate its advantages and keep countries seeking its benefits within the fold of the West (Makin, 1989: 18). Since most major economic centers lay outside of the Soviet Union, the isolation would affect only the Soviet Bloc while the West thrived. Eventually the Soviets would collapse.

The Yoshida Doctrine

The Yoshida Doctrine, so named by Pyle (1992: 18) after the visionary Japanese prime minister, was Japan's postwar policy of concentrating on economic growth while relying upon the United States for security. This policy arose from the conditions set by the United States after its defeat in WWII. Japan's occupation by the United States was to last for seven years. U.S. policy goals were to exorcise Japan of fascism and to prevent any future threat of Japanese imperialism (Pyle, 2007: 215). Only two years into that occupation, however, the United States shifted gears to making Japan its primary Asian ally in the Cold War. The outbreak of the Korean War in 1950 stimulated this change. As Komiya and Itoh explained,

> After the Chinese Communist Party took over mainland China, the threats of the Soviet Union and China in the Western Pacific evidently increased, and U.S. policy shifted swiftly from weakening the Japanese economy to promoting its reconstruction and development. A strong Japan would not only lessen the burden of economic aid for the United States but also make Japan a bridgehead of Western democracy in the Far East, an area where East-West tension was high. From the United States' point of view, it was necessary to provide Japan with ample opportunities to engage in worldwide trade. (1988:179)

The United States targeted Japan for special treatment. As one U.S. government official wrote in 1952,

> The most highly industrialized country in the Far East must remain outside the Soviet orbit if there is to be a free Asia, and to this end U.S. policy should be directed…even to the extent of providing an unrestricted market for such Japanese goods as American consumers find attractive. (Heginbotham and Samuels, 1998: 177)

This meant that Japan would receive financial aid, access to U.S. markets, and political and military protection from the United States (Pyle, 2007: 212-213). As Chalmers Johnson put it, America did "everything an ally could to help" Japan regain its economic footing during the postwar period (Heginbotham and Samuels, 1998). Perhaps most significantly, Japan was spared the psychological and material costs of participating in international politics. But also important was that the United States kept its markets open to Japan's goods while allowing Japan to severely limit access to its own economy. As Pyle notes, "Pursuing policies of economic nationalism within a free-trade order would not ordinarily have been tolerated, but because the United States was locked in a life or death struggle with the communist bloc and gave priority to the health of its security alliance with Japan, the strategy succeeded" (2007: 212).

Additionally, the expanding world trade that the United States was promoting through the International Monetary Fund (IMF) and the General Agreement on Tariffs and Trade (GATT) permitted a vigorous expansion of Japanese manufactured goods. By adopting new Western technology rapidly, it would strive to produce and export increasing quantities of more technologically advanced and internationally competitive products. Accordingly, Japan gave priority to industries that made the most sense for export-led growth (Pyle, 2007: 249-257). "Under the Foreign Capital Law of 1950, proposals were judged for their usefulness in stimulating corporate growth and international competitiveness" (Shimada, 1991: 289-290). Because it was resource poor, Japan also limited imports as far as possible to primary products (raw materials, fuel, and food) and exported manufactured goods. In that way Japan became a value-adding trade nation (Pyle, 2007: 257).

Industrial Policy

During its high growth period of 1955-1971, Japan approached industrialization very differently from other countries. It created "industrial policy," what Gilpin (1988: 153) referred to as "the active participation of the state in shaping the industrial pattern of development." Industrial policy was more than government-led national economic development, however. It was, according to Johnson (1982a: 236), a systematic array of supportive and coordinated programs, incentives and disincentives designed to

efficiently transfer international sources of technology at bargain rates to Japanese firms. Its application during Japan's high-growth period positioned the country not only to completely rebuild its postwar economy, but to economically challenge its only benefactor, the United States. Technology transfer was, as Johnson (1982a: 16) argued of Japan's industrial policy, "the heart of the matter."

Because of containment policy goals of rebuilding former adversaries and U.S. attitudes toward free-market capitalism, Japan had easy access to new, proven, and inexpensive Western technology, which it imported in large quantities. Between 1951 and 1984, more than 40 000 separate contracts were signed by Japanese firms to acquire foreign technology; over that 34-year period, Japan paid US$17 billion in royalties, a small fraction of annual U.S. R&D costs. Japan obtained nylon from DuPont, nuclear power from General Electric and Westinghouse, the transistor from Bell Laboratories, and television tubes from Corning Inc. Licensed U.S. IP contributed the technological basis for nearly all of Japan's modern industries (Pyle, 2007: 249).

The transfer slowed, but continued long after Japan's high growth period. In 1981 alone, the Japanese Science and Technology Agency reported that 2 076 new technology introduction agreements were concluded with foreign suppliers at a cost of US$537 million. These figures were far greater than corresponding amounts for other countries (Doi, 1986: 159).

One particular Japanese government agency, the Ministry of International Trade and Industry (MITI), was responsible. It developed a highly effective method for collecting international technology for redistribution to Japan's larger firms. MITI's research division monitored (mainly) U.S. companies for technology consistent with strategically targeted growth areas (steel, machinery, and petro-chemicals) in Japan's economy. It then authorized foreign currency and granted a license for purchase by the Japanese firm, which was then also given a multitude of other benefits such as land, free or reduced-cost installations, additional infrastructure, and tax breaks (Eads and Yamamura, 1987). Once transferred to the initial firm, the imported technology then circulated within networks begun in pre-war *zaibatsu* conglomerates (Imai, 1992: 213-214).

As Johnson notes,

> before…the late 1960s and 1970s, no technology entered the country without MITI's approval; no joint venture was ever agreed to without MITI's scrutiny and frequent alteration of the terms; no patent rights were ever bought without MITI's pressuring the seller to lower the royalties or to make other changes advantageous to Japanese industry as a whole; and no program for the importation of foreign technology was ever approved until MITI and its various advisory committees had agreed that the time was right and that the industry involved was scheduled for 'nurturing.' (1982a: 17).

It is unlikely there was ever such an unusual or successful system of technology transfer as MITI's, not least because of its tight governmental control and singular vision. And the results were startling. During the postwar period, 1946-1976, the Japanese economy grew 55-fold (Johnson, 1982a: 16). Rapidly decreasing technology costs (most evident in steel, autos, synthetic fibers, petrochemicals, and to a lesser degree, electronics) and late entry to industrialization allowed Japanese firms to skip the time-consuming process of developing technology were crucial (Murakami, 1987). The United States secured its ally in the Cold War by gifting intellectual property.

Japan Catches Up

As a result of its effective technology transfer methods and the other benefits of its relationship with the United States, Japan made rapid advances in steel, automobiles, and consumer electronics. The short period of time in which these advances came gave rise to structural dislocation to the United States and Europe, whose share of world markets shrank as Japan's expanded over the course of the Cold War (Okimoto and Inoguchi, 1988: 2). Japanese exports increased nearly 25 times between 1955 and 1970. Between 1955 and 1987 they increased 114 times (Pyle, 2007). In 1952, Japan's economy was only five percent that of the United States. By 1986 it was over half its size (Okimoto and Inoguchi, 1988: 1-2).

Japan's government agency MITI drove this process. However, its success caused many problems for Japan, including "serious damage to relations with Japan's main economic partner, the United States, because of trade imbalances, an undervalued yen, and Japanese procrastination in implementing capital liberalization. Pressures for Japan to lower its trade barriers began in the mid-1960s. The first efforts were cosmetic and real liberalization came only slowly (Johnson, 1982b: 275-276). Japanese resisted removing protectionist barriers to their high technology sectors either because they saw them as their most competitive or because doing so threatened Japanese values (Gilpin, 1988).

Recent Status

In February 2002, then Prime Minister Koizumi made a speech advocating a stronger Japanese patent system and encouraging more effective assertion of patent rights by Japanese companies. Since then, the Japanese government has created a Strategic Council on IP, created a new Intellectual Property High Court, amended Japanese import laws to prohibit importation of goods that infringe Japanese patents, and taken measures

to improve patent examination. In addition, he put into force a basic law on IP; adopted a strategic program for the creation, protection, and exploitation of IP; and did everything in his power to promote change in the Japanese corporate view of IP. Koizumi did his part. Have Japanese companies followed his lead and become more effective in asserting their patent rights? Many commentators in the U.S. have looked at these government changes, and concluded that the attitude to IP has changed permanently in Japan.

The number of patent applications that a company makes indicates the size of the budget and the relative importance that company places on IP, although it might reveal very little about the company's overall IP strategy (Ludlow, 2008). Japanese assignees are the largest single geographic origin for patents filed worldwide (Ludlow, 2008). The Derwent World Patents Index reveals that in electronics and semiconductors, Japanese received about 52 percent of all patents granted worldwide in 2005.

Japanese companies also dominate the list of top patent grant owners in the United States. More than half of the top ten annual assignees in the U.S. Patent and Trademark Office (USPTO) have been Japanese companies consistently over the past fifteen years. Japanese companies have steadily increased their investments in patents. Over the 15-year study period, the study group of the top five Japanese semiconductor companies has increased its collective total patent filings by a multiple of three (Ludlow, 2008). Ludlow explains that, in contrast, the study group of the top five U.S. semiconductor companies has increased its patent filings almost nine times. Despite this faster rate of increase, U.S. companies still lag behind, since the Japanese industry started from a much higher base number of patent grants in 1991.

Having considered both ends of the spectrum across Asia with respect to IP, we will now look at the source of the greatest IP threat, China, beginning with its Special Administrative Region of Hong Kong.

Hong Kong

We will reference Hong Kong (HK), now known as the Special Administrative Region of Hong Kong, having reverted to the motherland in 1997 after over a century of colonization by Great Britain. The Basic Law of Hong Kong separates the IP systems of China and HK. So there is an absence of mutual IP protection between the two regions. IPRs registered in HK will not necessarily receive protection on the mainland. Means exist for mutual recognition of patent, trademark, and design applications between the two jurisdictions (Selby, 2003).

Hong Kong is perhaps the most shining example of capitalism in the world backed by the rule of law. Such is the esteem for the HK legal system that many contracts

signed in Asia, even on the China mainland, are signed with arbitration clauses whereby if there is cause they will seek resolution in Hong Kong.

As a result, it boasts many law firms and other specialist service firms whose areas of expertise include:

- Advising clients on patent, trademark, copyright, and design infringements in Hong Kong and China and instituting legal proceedings and arranging administrative proceedings to protect these rights;
- advising clients on domain name disputes and copyright issues relating to the use of the Internet;
- assisting clients on obtaining trademark, patent, and design protection in Hong Kong, China, and the Asia Pacific region;
- assisting clients in the licensing and assignment of patents, trademarks, computer software, domain names, and other IP rights;
- conducting due diligence in transactional matters, advising on assignments, franchising, and the licensing of IP Rights in Hong Kong and China; and
- coordinating and managing clients' portfolios of IP rights (*Managing Intellectual Property*, 2005).

Collectively all the major tools and institutional arrangements exist in HK to muster high levels of protection across China and other Asian markets. So we begin to explore why there remains a widespread IPR enforcement problem.

China

The Peoples Republic of China (PRC) is now the world's second largest economy and perhaps the most atavistic of all IP environments (Reid and MacKinnon, 2010).

IPR-Loss Risks in China

China claims, rightfully, to have made tremendous progress in developing an IP protection framework, and complaining too much threatens to sour the trading relationship at the highest level (*Wall Street Journal*, 2007). Much political rhetoric emanating from the United States, unfortunately, ignores this and threatens damaging what could be a much more productive relationship (Romney, 2012).

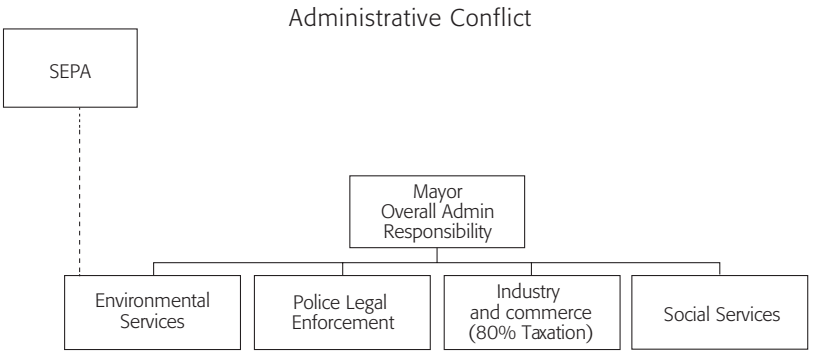
For a considerable time, Western and Japanese companies have viewed Chinese companies as global IP pariahs, anticipating they will steal their proprietary formulations

and software (Buckley, 2005; De Filippo and Ip, 2006). IPRs are clearly difficult to protect because of their inherent "shareability" in that they may be in use simultaneously by an infinite number of people.

In view of China's recent reforms on IP protection (see next section), Lieberthal (2005) maintains that Western firms will have to rethink the manner in which they develop new technologies and bring them to market. In the quest for growth, Lieberthal contends, local officials are encouraged, via close ties to state-owned and other enterprises, to engage in corruptive practice. This ensures that wealth is generated at local levels by virtue of officials' connections to these local firms. If local companies generate profits, and government officials derive incomes from these firms that are in turn linked to the theft of IP, it follows that these companies can then obtain protection from the same local government officials even if the courts rule against them. In China, the courts and their officers are often subservient to these local government officials, so the only way the central government can intercept and influence the process is to break the links that tie local officials to firms.

Breaking these links, in reality, is very difficult to accomplish due to the impact this would have on the incomes of local officials and their families as well as others in their matrix of networks. As we can see in Figure 1, the mayor of a Chinese city has overriding responsibility that transcends conflicting interests. Any changes that impact on the security of employment also imperil social stability, a topic that resonates both with local government as well as Beijing. So if a complaint comes into the mayor's office about pollution or IPR infringement, the mayor will always have to remain sensitive to the impact on employment and taxation revenues before heavy-handedly agreeing to a draconian measure like shutting down a plant.

Figure 1
CONFLICTING GOVERNANCE ISSUES



Note: SEPA stands for State Environmental Protection Agency.

AmCham-China's 2011 Business Climate Survey demonstrates that an increasing proportion of member companies regard China's IPR enforcement as a top business concern. The 2011 survey reveals a rise in the percentage of members who rank IPR infringement among the top five business challenges, from 19 percent in 2010 to 24 percent in 2011. Some of the negative perceptions have changed little in the last five years, as can be shown by studying the AmCham-China (2006) report. It showed that 55 percent were hurt by violations of IP rights and 41 percent of U.S. companies in China believe counterfeiting of their products increased in 2005. IP infringements were cited less frequently (21 percent) as being one of the top business challenges in 2007 (Amcham-China, 2008b).

However, a national IPR enforcement campaign began at the end of October 2010. In March 2011, the campaign was extended an additional three months. This new campaign places the Ministry of Commerce (Mofcom) back in the lead, coordinating enforcement initiatives and software legalization among the relevant agencies. AmCham-China members have actively engaged with the Chinese government on the campaign and have been pleased by many of the concrete outcomes that have resulted from the government's initiative.

It is clear, however, that many areas still require immediate attention. These concerns include substantial structural problems, such as weak punishment deterrence for IPR infringements, failure to criminalize illegal software usage by enterprises, local protectionism in the form of stronger IPR enforcement for local brands, disproportionately low resource allocation to copyright agencies and IP crime enforcement, and varying local administrative enforcement practices (AmCham-China, 2011).

The hardest-hit companies were, as in Indonesia, those involved in movies; fashion knockoffs such as Gucci purses; software; networking technologies (e.g., Cisco clones); automotive parts; and pharmaceuticals. AmCham-China 2006 reports may, in some way, be tendentious insofar as members may vent to spur action from Beijing. However, the findings lend support to Lieberthal's argument that Beijing, while trying to implement its recently introduced IP protection laws, is being undermined by local governments.

IPR Protection Regulation Activity in China

The introduction of tough new IP regulations in China, together with increasing enforcement is, however, beginning to change the perception of China as an IP sinkhole, and a plethora of companies are taking high technology to China (Scott, 2006). Nonetheless, the changing climate for this contentious issue has importance beyond the

normally associated province of hard-wired high-tech product arenas; it applies to industries such as pharmaceuticals, software, trademark, and other rights-based businesses. For example, in 2004, the Chinese patent review board invalidated Pfizer's patent on Viagra, unleashing sharp criticism about the country's record on IP protection. Signaling a marked change of approach, China's president, Hu Jintao, on his 2006 visit to the U.S., stated that the protection of IPRs was "essential" for China's development and its ability to build an economy based on innovation rather than low-cost manufacturing (McGregor, 2006). Significantly, in June 2006, a Beijing court backed patent protection for Viagra by overturning the earlier ruling by the patent review board (Zamiska, 2006). This was seen as a potential landmark case for foreign companies seeking greater protection of IP against the flood of fakes and counterfeits.

An additional problem met by Pfizer, like many other foreign players, was that it failed to appreciate the need for and significance of Chinese brand names and to what extent they constitute a critical part of a branding and trademark strategy. Failing to provide a Chinese brand name in a timely fashion is to invite the Chinese population to invent one. This they did, even before the product had reached the market. The name, *Weige*, became the everyday reference term for the product but remained beyond the control of Pfizer. Chinese branding is one of several elements on the foreign investors' report card that calls for improvement.

Breach Behavior in China

There are many examples of China-based IPR breaches. Huawei Technologies, for example, China's leading telecom-equipment maker, was successfully sued by Cisco for IP theft in a U.S. court. Huawei is one of the so-called "state champions" that the central government decided would be among the thirty to fifty of its best state firms to be built into "globally competitive" multinationals by 2010 (*The Economist*, 2005a). At home, these companies enjoy tax breaks, cheap land, and virtually free funding via the state-owned banks. Abroad, the Chinese government helps them secure contracts or exploration rights (*The Economist*, 2005b). In the conflict with Cisco, pundits agree, Huawei decided that its development in Europe and the U.S. would be less hindered if it cleared the accusations of technology theft.

Chinese car firms counterfeit foreign models pervasively: one local favorite is half Mercedes, half BMW. So ahead of the game are the counterfeiters, that Harry Potter books were published in China before J. K. Rowling, the author, had written them. AmCham-China's president maintains, "the problem [of IP theft] is growing faster than the enforcement efforts...and this problem of growing exports is really one to

watch because that is going to reverberate against China on the international stage" (AmCham-China, 2006). Perhaps some allowance for cultural impediments on the Chinese side is called for to establish a tighter IP protection regime (Yang, 2005). For example at stages during the Qing dynasty (1644 to 1912), China ruled almost a third of the world's population and oversaw a third of world gross domestic product (GDP). It looks back on a history of innovation, spanning the inventions of paper money, explosives, the printed book, and the professional civil service (Maddison, 2001). Today, more than a vestige of resentment remains among the Chinese population that their inventions attracted none of the royalties they are now exhorted to pay others.

IP Misunderstandings and Complications

IP conflicts are perhaps the result of straightforward misunderstandings due to language difficulties and culture-based nuances. Chinese and U.S. managers seemingly communicate less because of the language barrier, thereby creating misunderstanding about IP issues (Yang, 2005). Of course, things are much more complicated than this; for example, a magazine formerly billed as China's *Rolling Stone* is now limited to using its name of *Audiovisual World* since local regulators banned it from using the U.S. title's masthead. The cover designers, however, have endeavored to make the Chinese characters for *Audiovisual World* resemble the word "Rolling." Such visual contortions underscore the legal and regulatory complexities surrounding foreign involvement with trademark issues (Dickie, 2006).

An increasing number of software companies as well as CIOs from a variety of industries are looking to China to outsource some of their software development. Companies can perhaps learn from the outsourcing experience of the software industry. Some of the more successful beneficiaries of this phenomenon, such as WIPRO Technologies and Infosys (both interviewed in 2006), have established proper safeguards that leave their employees no way of copying code or sending it outside the workplace. Key measures they have implemented include using computers without USB or disk drives and strict control of external network connections. Projects are divided into different pieces and across separate sites, so that no single employee has the complete picture. Visitors to their facilities are obliged to reveal each item of electronic equipment and are subject to careful scrutiny. This contrasts with Microsoft, also interviewed in 2006: employees at its Redmond campus are allowed to bring in a variety of computers with no restriction on the use of USB drives.

To protect IP assets, an IP management strategy should be developed and implemented prior to conducting business in high-risk parts of the world (Brown et al.,

2005). As others have elaborated, many executives still think of protecting IP solely in legal terms —sometimes only after property has been stolen (Dietz, Lin, and Yang, 2005).

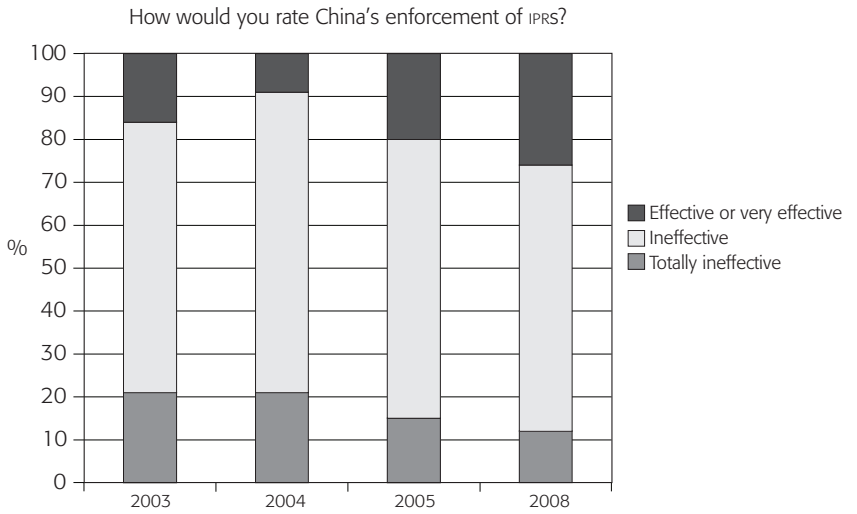
The way to be sure of reaping all the business benefits of an outsourcing transaction according to Whalen and Hsieh (2006) is through vigorous protection of intellectual property assets. To address the risks of having its trade secrets misappropriated when a company outsources its work to China, the company should consider: 1) registering IP with the relevant governmental agencies of China; 2) having native speakers on site at the service provider's premises to educate its employees on preservation of confidential information; 3) making sure that the Chinese service provider has assets in the U.S. and is jointly liable for any acts of misappropriation by their employees; 4) ensuring all services have sufficient errors and omissions coverage; 5) ensuring the indemnification clause addresses liability of the U.S. company for its Chinese service provider's errors and omissions; and 6) videotaping the reading and signing of the agreements. In drafting the outsourcing contract, attorneys should specify what information is considered a trade secret; impose a duty upon the provider to immediately seek injunctive relief for any misappropriation, and require security experts to be employed by the provider. The measures to protect IP in an outsourcing transaction have to begin with the companies' own internal procedures.

This author's finding, based on field research as well as ongoing connections with trade associations, chambers of commerce and business-based pressure groups in China, reveals that, while there is a great deal of discontent among foreign players concerning Beijing's ability to offer protection to IP owners, many of those IP owners' procedures for protecting their IP are ineffectual (Reid and MacKinnon, 2010).

The central message of my research, conducted in China during 2006 with IP owners, IP law firms, and consultants, is that the environment for IP protection, and potential for obtaining redress, is somewhat improved. This is supported by interviews I conducted in China during 2011. Companies were reporting more support both in attitudinal and resource terms from the Public Security Bureau (China's police, or PSB) and other authorities.

The management of IP cannot be left to technology managers or corporate legal staff alone. It must be a matter of concern for functional and business-unit leaders as well as a corporation's most senior officer (Reitzig, 2004). An organization needs to be able to describe the technology and the IP rights that give it exclusivity in that technology, as well as any potential liabilities (Feng and Golden, 2002). Reid and MacKinnon (2010) suggest that to be able to assess and inventory company IP, you must know where to look. A company needs to determine whether it does, in fact, have rights to its IP. If it does, there are some methodical steps it can take to ensure they do not dissipate, for which they propose the application of their BARD framework.

Figure 2
THE STATE OF CHINA'S IPR ENFORCEMENT



Source: AmCham Business Climate Surveys, 2003, 2005, 2008.

The European Union

The European Union (EU) 27 covers 4 324 782 sq. km., slightly less than half of the area of the U.S., yet with its population of almost five hundred million dispersed across highly developed economies, it achieves the status of the world's single largest marketplace. IP is dear to the main body of European countries. Indeed the EU Chamber of Commerce runs seminars in China for its members and others with the express objective of alerting them to the pitfalls of doing business in China from an IP perspective.

It is estimated that the EU incurs IP losses of around US$40 billion per annum due to counterfeiting (Fishman, 2005). Indeed, trafficking in fake goods is as lucrative as dealing in narcotics and weapons for organized criminals —and it has a lower risk for prosecution, says Jose Manuel Barroso, president of the European Commission (EC) (Ebert, 2008). McDermott (2007) offers information regarding the international Anti-Counterfeiting Trade Agreement (ACTA), which aims at combating the production and trade of fakes. It states that the member nations, including the U.S., Canada, the EU, Japan, and Korea have pledged to protect intellectual property rights by enforcing stronger laws, closer cross-border cooperation in law enforcement, and adopting practices that make enforcement real and effective.

The EU 27 clamped down in a singular effort (Ebert, 2008). Reiterating the roles played by Mafiosi-like organizations that are engaged in IP theft, EC President Barroso

argued, "Counterfeiting now takes place on an industrial scale. The days when fake goods meant shifty men with a suitcase full of Rolexes, or teenagers swapping cheap computer games, are over" (Ebert, 2008). The Organization for Economic Cooperation and Development (OECD) estimates that global trade in fake products is worth about US$200 billion, "higher than the gross domestic product of more than 150 countries" (Ebert, 2008).

As Klamecki (2008) explains, "The physical expansion of the European Union has implied a parallel evolution in its political and economic sectors. The European Union is marked by the principle of subsidiary, which allows the member states to legislate in fields where the Community does not have any competency area and intervene when a supranational norm becomes necessary to harmonize the government of the Single Market. Depending on the subject, the field of action is more or less left to the Member States."

This organization of the EU is cumbersome and complex. When 27 countries agree to share policies, it can become even more complex for a foreign, non-community settled company. And the situation with respect to IPRs is no exception. Though the EU has developed rules and regulations relating to European patents, or the community trademark, IP rights remain national rights (Klamecki, 2008). This can be destabilizing for a company that wishes to establish itself in Europe and license trademarked goods. Indeed, the free movement of goods and services governs subsequent principles, such as the community-wide exhaustion of rights, and is the basis of European competition law that regulates licensing agreements.

The EU also finds China a challenging IP environment. Since 2006, improvements have been made on the policing and prosecution side of things. Furthermore, my interviews revealed the vast majority of these cases involve local companies in dispute with other local companies about rights infringements. Of 77 463 IPR cases brought to the courts in 2007, 74 200 have been decided (AmCham-China, 2008a).

However, as was explained in an email to this author by the IP officer of the EU delegation to Beijing, first cases have to be accepted as IP cases by the legal machine. Apparently the "*li an*" system, the case acceptance system, impacts not so much on the total number of IP cases heard in court annually, but rather on the official number of interim injunctions granted. Chinese officials stress that the success rate for applications for interim injunctions is higher than 80 percent. In reality, however, only 2 percent of the applications are indeed successful. This difference is caused by the *li an* system. The 80-percent-plus number does not show how many applications were not even admitted for a decision by the court. An applicant files a motion for injunction with the court. Before the court accepts and establishes a case, it will look at whether all requirements are fulfilled. Often, the application is already rejected at this stage

(e.g., because of the lack of an acceptable guarantee by a Chinese bank). An application suffering this fate is not counted in the statistics. Only an established case will then be formally decided. That means, in turn, that the courts will accept only those applications deemed highly likely to be granted. This leads to an artificially high success rate in the official statistics.

The *li an* problem is even bigger in the administrative enforcement system of China, where it can be used by administrative authorities to frustrate applicants by not granting their case establishment. Without a formally established case, no action can be taken. There is no remedy in practice to address the refusal of administrative enforcement authorities to accept a case (Pattloch, 2009).

Since 2004, the EU has a new set of rules governing the licensing of patents. As defined by Article l (l) (h) of Commission Regulation (EC) 772/2004 of 27 April 2004 on the application of Article 81 (3) of the EU Treaty to categories of technology transfer agreements (TTBER), the term "patents" encompasses patent applications, utility models, applications for registration of utility models, designs, topographies of semiconductor products, supplementary protection certificates for medicinal products or other products for which such supplementary protection certificates may be obtained, and plant breeder's certificates. There is no shortage of pitfalls marking the new regime, and the learning curve is steep. Moreover, the stakes are high: since it is no longer possible to notify the European Commission (the Commission or EC) of an agreement about a negative clearance or individual exemption, companies must rely chiefly on self-assessment, described by Marquis (2007) as the key buzzword in the "modernized" world of EC competition law.

One company to feel the brunt of the tough approach to EU monitoring and regulatory control was Microsoft. Claiming that it was attempting to protect its IP, the company maintained a longstanding action to resist releasing the source code of its operating system software to third-party developers. Just a week before the 2004 decision, *The Economist* (2007) revealed that the company had offered a friendly settlement of the case, but this was brushed aside by then-EU Competition Commissioner Mario Monti, who opted instead for a formal decision that "would set clear principles concerning the future conduct of Microsoft, to avoid going back to these sorts of abuses" (*The Economist*, 2007) Microsoft promptly lodged an appeal with the EU's Court of First Instance (CFI), which upheld the European Commission's 2004 decision. Microsoft subsequently gave up.

North America

Given that the largest concentration of IPRs resides in the United States, this section will be viewed primarily through a U.S. lens with less focus on Canada and Mexico. After examining the EU above, it is clear that the United States and the European Union differ significantly in terms of their innovative capacity: the former has been able to gain and maintain world leadership in innovation and technology while the latter continues to lag behind (Crescenzi, Rodriguez-Pose, and Storper, 2007).

Notwithstanding the magnitude of this innovation gap and the political emphasis placed upon it on both sides of the Atlantic, the empirical literature has emphasized the structural differences between the two continents in the quantity and quality of the major "inputs" to innovation: R&D investments and human capital (Crescenzi, Rodriguez-Pose, and Storper, 2007). Largely we are talking of IP. The higher mobility of capital, population, and knowledge in the U.S., Crescenzi, Rodriguez-Pose, and Storper (2007) explain, not only promotes the agglomeration of research activity in specific areas of the country but also enables a variety of territorial mechanisms to fully exploit local innovative activities and (informational) synergies. But in the European Union, imperfect market integration and institutional and cultural barriers across the continent inhibit the development of IP, so these activities remain at lower than U.S. rates.

IP protection topics were some of the key negotiation issues in the NAFTA agreement and that component of it was hailed as significant by Roberto Villarreal Gonda, general director of technological development at Mexico's Ministry of Trade (Buchholz, 1992). So, when studying China's rapid development and its impact on NAFTA, Reid, Jimenez, and Rahner (2006) commented on the lack of a rich, NAFTA- based IP literature. These authors demonstrated the success of China's exports to the U.S. to the detriment of Mexico, despite NAFTA. Searches of the major business databases (ABI Inform, Academic Search Elite, Business Source Complete, and Business Source Elite) revealed comparatively little in the way of refereed journal hits, and a relative paucity of articles beyond the year 2000. An exception to this was an article by Penfold, Batteson, and Dickerson (2005), who concentrated on a specific category of IPRs, image rights, and compared the United States, Australia, the United Kingdom, Canada, and Europe.

At the end of the nineteenth century, copyrights lasted for fourteen years and could be extended another fourteen if the copyright holder petitioned for an extension. Today, corporate copyrights last for ninety five years, while individuals retain copyrights for seventy years after their deaths. Occasionally extensions are granted. The most recent extension of copyright, passed by the Congress in 1998, was nicknamed the Mickey Mouse Protection Act, because Disney's lobbyists were intent on

keeping Mickey Mouse from falling into the public domain —and on preserving billions in profits for Disney (Nocera, 2005).

The U.S. Department of Commerce estimates that American companies lose between US$20 billion and US$24 billion annually from counterfeiting and piracy (Fishman, 2005; WIPO, 2007). IP accounts for 75 percent of *Fortune* one hundred companies' total assets (Kunzler and Payne, 2004; Reitzig, 2004). For U.S. manufacturing firms the share comprising IP is 70 percent (Rivette and Kline, 2000). Nearly 75 percent of the Dow 30's value is now in intangible, people-based "assets" including knowledge, business processes, and IP that is not yet adequately reflected in financial statements (Kunzler and Payne, 2004). Moreover, 35 percent of patented technologies, valued at US$1 trillion, is treated as wasting assets (Rivette and Kline, 2000); the scale is huge. More could be done to ensure the integrity of IP. Unfortunately, U.S. companies have been shown to be careless in ensuring their intellectual property does not leak (Reid and MacKinnon, 2010).

There is no evidence to suggest that the Canadians are any better positioned on this score. Nortel Networks Ltd., a Canadian one-time giant telecommunications firm that has now fallen on hard times, demonstrates the slackness prevalent with respect to IP protection. Gorman (2012) revealed how seven passwords were stolen from top Nortel executives, including the chief executive. Hackers —who appeared to be working in China— penetrated Nortel's computers as far back as 2000, perhaps earlier, and over the years downloaded technical papers, research-and-development reports, business plans, employee emails, and other documents.

The hackers also hid spying software so deeply within some employees' computers that it took investigators years to realize the pervasiveness of the problem. They had considerable time to do their damage. All they had to do was figure out what they wanted and it was there for the taking. The only steps the company took were to recast the seven passwords. This shoddy management behavior perhaps explains why the company ended up selling its intellectual properties and assets after filing for bankruptcy in Canada (Beer, 2011). Kennedy-Pannett (2009), discussing IP protection policies among corporations in Canada, maintains that IP protection is a way to guarantee profits for corporations as it protects product inventions. Yet, Canada, one of the signatories to the TRIPS agreement, has suffered from unrestrained piracy that has reportedly caused over a million job losses in 2007. In May 2009, Canada was put on the U.S. Trade Representatives' priority watch list (Thompson, 2010).

Mexico is not generally thought of as a rich repository of IP. However, this is not so. It is a country with a rich cultural heritage, which arguably provides opportunities for harvesting IP benefits. Tequila, a traditional beverage emblematic of Mexico, is part of that national cultural identity (Olmedo-Carranza, 2009). Archeological and anthropo-

logical sites and pieces, as exemplified by Teotihuacan, are ripe for sensitive exploitation (Webmoor, 2008). However, criminal networks based in the United States and Mexico have benefited enormously from globalization. They have been able to reap fortunes by illegally trafficking commodities, some of which are based on pirated and counterfeit IP (Naim, 2003).

There can be downsides to IP protection. In their study to determine whether implementation of the TRIPS Agreement in Latin American and Caribbean countries has generated patent legislation sensitive to public health needs, Oliveira et al. (2004) found that Mexico was one of the Latin American countries that did not allow for parallel importing of pharmaceuticals. Believing there to be little empirical evidence concerning the effects of intellectual property rights in technologically advanced developing countries, Léger (2005) examined the Mexican maize-breeding industry. She showed that, contrary to the hypothesis that IPRS would support innovation, they play no role in the industry.

Léger argues that IPR theory should be revised to include characteristics of developing countries critical for the good functioning of IPR. In this respect, she listed the quality of the institutional environment and the importance of transaction. Given Mexico's relatively good score in these critical dimensions, IPRS, she concluded, are likely to play an even smaller role in other developing countries. Finally, a very important perspective is that the IP regime privileges the interests of North America to the detriment of Latin America. The price exacted for economic integration with the neighbors to the north is more painful for Mexican maize farmers, among many, than for U.S. engineering companies or brand owners venturing south.

Having performed a superficial survey of the literature relating to Asia, the EU, and North America as it applies to IP, I shall try to suss out some key propositions.

Distillation

As Goldsmith, Ramos, and Steiger (2006) put it, the protection of intellectual property rights (IPR) has been a contentious issue for more than twenty years. Industrialized nations have moved to knowledge-based economies, and simultaneously, trade barriers have fallen, making IP vulnerable. Adding to this vulnerability are conflicting international institutional environments, belief systems, and economic realities. The debate over IPR protection has become an acute global trade issue that pits the net-technology-producing economies (NTPES) against those that are net-technology-consuming (NTCES). As a result, there has been much debate about the impact of alternative IPR regimes (tight or loose) on the welfare of NTCES. Policy makers, often to protect

their trade interconnectedness in both sets of economies, search for arguments to persuade resistant NTCEs to follow the NTPEs' model of strict IPR regimes. The NTCEs, faced with a dilemma, search for arguments to justify looser regimes or to convince their populations that tighter regimes are in the best interests of the nation.

Arguably there are five key dimensions to this issue:

- level of IP ownership and generation;
- trade interconnectedness;
- machinery to police and protect IP;
- motivation to comply; and
- subversion in the governance system.

Level of IP ownership and generation

Clearly, NTPEs have the incentives to ensure that their IP is exploited in fair environments where they may have recourse to the law should infringements occur. When they consider the behavior of less IP-oriented markets they tend to privilege their positions as IP owners.

Trade Interconnectedness

Where there is trade between NTPEs and NTCEs, the necessary preconditions exist to work toward putting in place IP protection regimes. To keep trade relations on a steady track, NTCEs feel obliged to see that they take IPR issues seriously and may introduce the necessary regulatory framework to prosecute violators. That does not necessarily mean these provisions are applied as they should be.

Machinery to Police and Protect IP

For many countries, especially net-technology-consuming economies, the machinery does not yet exist to police and protect IP, or it is lagging behind the requirements of the IP environment, even in countries like China, which now has an IP regulatory framework. The Public Security Bureau (PSB) requires the evidence of private investigatory firms to provide the basis for an investigation. So when the IPR sleuthing agency amasses the evidence to show that a party is in violation, then they will act.

Motivation to Comply

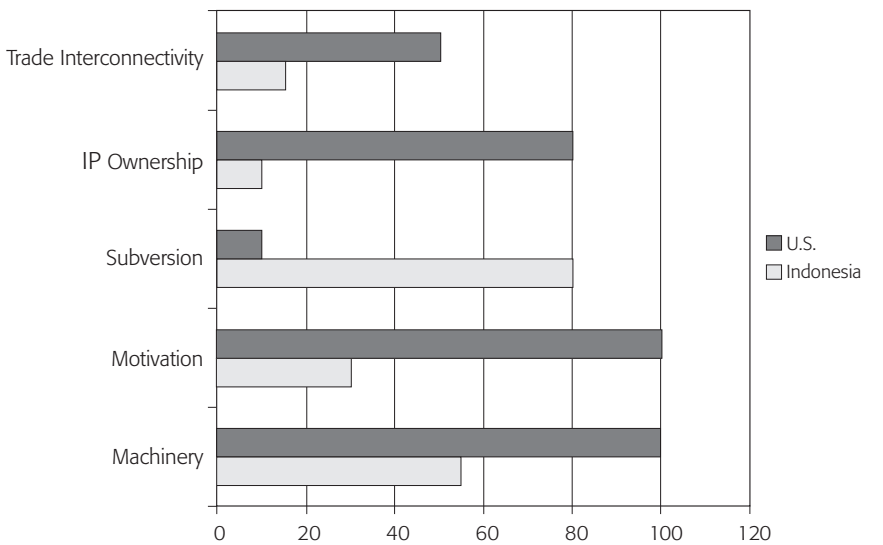
For a variety of reasons, such as protection of local interests, the government and policing agencies may be motivated to varying degrees to protect or ignore IP infringements. And this practice is pervasive.

Subversion in the Governance System

In some cases, the governance structures *in situ* work against establishing a stricter IP environment. As we saw illustrated in Figure 1, the nature of the governance system may work against protecting IPRs.

Figure 3 attempts to offer an intuitive illustration on how the countries at each end of the IPR continuum (Indonesia and the United States) compare, based on the five dimensions outlined above. Arguably, regarding trade interconnectivity, the U.S. economy is more interconnected than Indonesia. The U.S. is much better endowed with IP ownership. Lawsuits brought to address IPR infringements are much less likely to be subverted by the courts and those connected to court officials. Because Indonesia

Figure 3
THE FIVE DIMENSIONS



Note: The numbers on the horizontal axis are dimensionless quantities for comparative illustration purposes only.

is part of the world trading economy and has been a member of the World Trade Organization (WTO) since January 1995, there is motivation to comply. Moreover this motivation at the national governmental level has meant that utilitarian legal machinery has been installed.

In Figure 4, the dimensions from Figure 3 have been drawn with the U.S. in the inner ring and Indonesia on the perimeter. Figure 4 is intended as a metaphor to illustrate that the combinations of these dimensions in the United States result in a tighter protection level for IPRS, whereas in Indonesia the picture is more porous. In other words, IP protection is much harder to guarantee in Indonesia, and this pattern applies to greater and lesser degrees, depending upon the stage of economic development and the degree to which economies are net technology producers (NTPES) or NTCES. Figure 5 illustrates this principle by way of an S-Curve. It shows that as the process of economic development progresses, the ownership of IPRS increases. On the left we can see how NTCES are clustered under the first part of the curve, and with development, they ultimately transition from NTCE status to that of NTPES, which means they have something to lose by not being fastidious about protection. Arguably China is approaching the cusp, the threshold at which these issues need to be addressed.

Figure 4
INTELLECTUAL PROPERTY RIGHTS EXPOSURE
Indonesia (outer ring) versus the United States (inner ring)

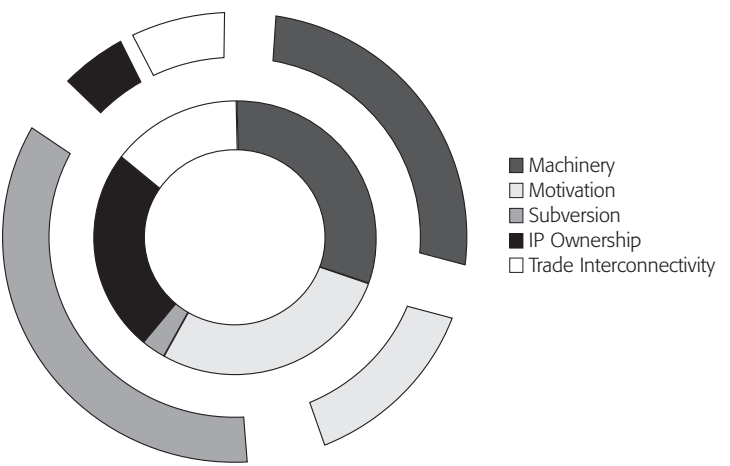
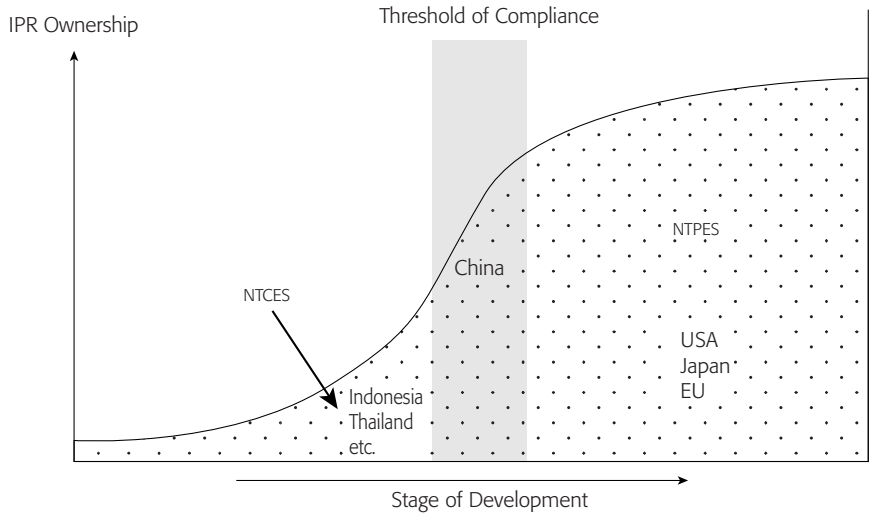


Figure 5
IP OWNERSHIP AND ECONOMIC DEVELOPMENT



Note: NTCES refers to net technology-consuming economies; NTPES refers to net technology-producing economies.

Concluding Observations

The importance of IPRs as key components of the economic system is clear. Those who own them need to protect them, and in the realm of international business, they must be able to rely on the legal machinery in the foreign markets they enter. The EU, Japan, and the United States are now the countries with the largest concentrations of IPRs and thus are the players with the most to lose from regimes that do not respect IPR protection. We have seen how the acquisition of IPRs was a major plank in the structure of Japan's post-WWII economic development, and this is increasingly becoming so with China. Though in China's case, many argue that much of the IP it has so far acquired is misappropriated. However, as China becomes increasingly vested with its own IP, it is tending more toward the behavior of a net-technology-producing economy, but this will continue to be compounded at the provincial and local levels for some time to come since misappropriation of Chinese IPRs can apply within China as well as with foreign-owned rights.

So, a quandary exists. In NTCEs, there is less motivation to comply by using the protection apparatus that may exist. This raises the question of how these NTCEs can be brought into a better state of compliance. There is no simple answer to this question. Further study and research is necessary to explore methods and approaches whereby

improved levels of compliance can be achieved. The answer may be one that is arena-specific. "Cleantech," for instance, is the name given to those emerging industries that focus on cleaning air and water as well as industrial processes. As an example of an arena-specific study, in a related paper (Ajemian and Reid, 2010), the potential is explored for a meta-initiative based on pooling of U.S., EU, and Japanese IPRs to facilitate the flow of so-called cleantech IPRs to China to assist in the clean-up of China as a result of its rapid development. Much more work needs to be done in this field.

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