

## Chapter 20

# Intellectual Property Rights

Intellectual property rights (IPRs) are associated with patents, trademarks, copyrights, trade secrets, and other protective devices granted by the state to facilitate industrial innovation and artistic creation (Wolfhard, 1991). The grant of exclusive property rights provides owners with personal incentives to make the most productive use of their assets and facilitates transfer by making possible a high degree of exchange. Intellectual property rights are one form of exclusive rights conferred by the state to promote science and technology. The issue of intellectual property has received wider attention compared to other property rights for the following reasons:

- The volume of trade in goods protected by IPRs is becoming increasingly significant as more countries produce and consume products that result from creative activity and innovation (Gadbaw and Richards, 1988).
- The globalization of markets has created opportunities for the production and/or sale of unauthorized copies to supply the newly generated demand. In the first quarter of 2005, over \$1.1 billion (U.S.) of counterfeit goods were seized worldwide. Over \$500 billion (U.S.) of such goods are seized every year. Copyright piracy amounted to about \$500 million (U.S.) in India and \$2.5 billion (U.S.) in China in 2004. In China alone, it is estimated that there are about eighty-three manufacturing plants with 765 production lines that specialize in the production of pirated goods (Bird, 2006; Linek and Iwanicki, 2006).

### ***WHAT ARE IPRs?***

Intellectual property rights are exclusive rights given to persons over the use of their creation for a given period of time. Such rights are customarily divided into various areas, as detailed in the following material.

*Export-Import Theory, Practices, and Procedures, Second Edition*

### ***Patents***

A patent is a proprietary right granted by the government to inventors (and other persons deriving their rights from the inventor) for a fixed period of years to exclude other persons from manufacturing, using, or selling a patented product or from utilizing a patented method or process. At the expiration of the time for which the privilege is granted, the patented invention is available to the general public, or falls into public domain.

Patents may be granted for new and useful products as well as processes for the manufacture (or methods of use) of new or existing products. The basis for patent protection is promotion of innovative activity, dissemination of technical knowledge, and facilitation of transfer of technology. Even though patents are granted as a recognition of the concept of a natural right in inventions, they provide an incentive for the encouragement of inventions and the promotion of economic development. With the monopoly grant, the patent owner can divulge the invention to the public and still retain exclusive use of it for the period of the patent. At the end of the monopoly period, the patent becomes available for the unrestricted use of the public. Patent protection also encourages transfer of technology through direct investment or licensing. In the United States, patents are valid for a period of twenty years from the filing date. Patent violations are generally referred to as patent infringement or piracy.

### ***Trademarks***

A trademark is a word, name, symbol, or device, or any combination of these, used by a manufacturer or seller of goods to identify and distinguish the particular manufacturer's/seller's goods from goods made or sold by others (Ladas, 1975). In general, trademarks perform three functions:

1. Identify one seller's goods and distinguish them from goods sold by others
2. Signify that all goods bearing the trademark come from a single source and are of an equal level of quality
3. Serve as a primary instrument in advertising and selling the goods

An important part of the advertising effort is to develop goodwill. Trademark rights can be acquired by registration or use (reputation). Registered marks are renewable. Once a trader acquires a reputation in respect of a mark, that is, an unregistered mark, it becomes part of that trader's goodwill and is protectable as a registered mark. Violation of trademarks consists

of counterfeiting and other forms of infringement, such as advertising, sales, or distribution of goods bearing a similar mark (to that of the owner) that results in deception or confusion. Counterfeiting is the unauthorized use of a mark. In the United States, trademarks are valid for ten years from the date of registration.

### ***Trade Secrets***

A trade secret involves a formula, method, or technique that derives independent economic value from not being generally known or available to other persons who can obtain economic value from its disclosure or use (Kinter and Lahr, 1983). The historical roots of trade secrets protection can be traced to ancient China, where death by torture was prescribed for revealing the secret of silk-making to outsiders, and to ancient Rome, where enticing a competitor's servant to disclose business secrets was a punishable offense. In England, the movement of artisans to other countries was prohibited by a series of statutes aimed at preventing knowledge of British processes from reaching possible competitors in Europe and America, and employers sued would-be emigrants and those who tried to seduce them (Ashton, 1988). Violation of trade secrets includes acquisition of a trade secret by improper means or disclosure without the consent of the owner.

In most developed nations, however, protection is afforded through laws pertaining to contracts, criminal law, or torts, such as breach of confidence (Seyoum, 1993; Hannah, 2006). Protection of trade secrets does not expire after a set period of time, as in the case of other IPRs. The owner, in effect, has perpetual monopoly on the innovation. A large part of technology being developed now, perhaps with the exceptions of pharmaceuticals and specialty chemicals, does not get patented. Many high-technology innovations, such as aircraft and automobiles, and most low-technology innovations, such as detergents or food products, are not patented (Williams, 1983). In some countries, a formula might be patentable, while methods of production based on personal skills are not patentable. Patent protection also ends at some point, even if one is able to obtain and keep the patent. Thus, companies prefer to maintain new innovations as trade secrets and protect their technology by contract rather than by patent.

### ***Copyrights***

A copyright is a form of protection granted to authors of original works, including literary, dramatic, musical, artistic, and certain other intellectual works. The owner of the copyright has the exclusive right to reproduce, distribute, sell, or transfer the copyrighted work to other persons. In the United

States, copyrights are protected for a minimum period of fifty years after the death of the author. The core copyright industries (i.e., business and entertainment software) are second only to motor vehicles and automotive parts in terms of estimated sales and exports (\$53.25 billion of exports in 1995) and also have grown twice as fast as the rest of the U.S. economy.

### ***IPRS AND INTERNATIONAL TRADE***

An important feature of IPRs is their exclusiveness and territorial dimension. This means that a patent holder or licensee is the person solely entitled to manufacture and market the patented product within a given territory of the state in which the patent is granted. The exclusive and territorial character of such rights is capable of creating obstacles to both the free movement of goods and competition. For example, a patent or trademark owner in country A may be entitled to block the importation of a product legally manufactured in country B by its own licensee or subsidiary. Although such restrictive use of IPRs interferes with free trade, the grant of monopoly rights is considered an acceptable trade-off to encourage research and the diffusion of new knowledge and technology. In short, free trade between countries as a result of an agreement such as North American Free Trade agreement (NAFTA), EEC, or World Trade Organization (WTO) does not preclude prohibitions or restrictions on imports, exports, or goods in transit justified on the grounds of the protection of IPRs.

A number of issues pertaining to IPRs have important implications to the conduct and growth of international trade. They are as follows.

#### ***The Growth of Trade in Counterfeit Goods***

The globalization of markets, the increased demand for new products, and the nearly prohibitive R & D costs to develop such products have created incentives for the unauthorized use of IPRs. For example, counterfeiting (false labeling for sale in export markets) has spread from strong brand-name consumer goods to a variety of consumer and industrial goods. Related violations include copyright, patent infringement, and unfair competition. The International Intellectual Property Alliance estimates that over half of all compact disks and about 70 percent of all video games sold in Brazil are pirated ([www.iipa.com](http://www.iipa.com)).

#### ***Lack of Adequate Protection for IPRs in Many Countries***

An important contributing factor to trade in counterfeit/pirated goods is the lack of adequate protection and effective enforcement of IPRs in many

countries. Furthermore, some new technologies do not fit within any of the existing types of intellectual property. In many developing countries, the protection of computer software, biotechnology, and semiconductor chips remains unclear. For example, copyright piracy exceeded over \$1.7 billion (U.S.) in Russia alone in 2004. Even though Russia has laws on IPRs, there is limited enforcement by local authorities. Jail sentences for piracy are rare and authorities do not conduct surprise inspections or seize/confiscate equipment (Bird, 2006).

### ***Piracy of IPRs as a Trade Barrier***

Given the fact that counterfeit/pirated goods displace those of legitimate producers, such action distorts international trade and has the long-term effect of reducing trade in technology-intensive goods. Piracy leads to the misallocation of resources by diverting trade from legitimate producers to pirates. Trade experts believe that elimination of piracy abroad of U.S. intellectual property could easily wipe out a majority of the U.S. trade deficit.

## ***PROTECTION OF IPRs***

### ***Protection under Domestic Laws***

Most countries have domestic laws to protect IPRs (for example, see International Perspective 20.1). In the United States, Section 337 of the Tariff Act of 1930 authorizes the International Trade Commission (ITC) to institute an investigation into the importation of articles that may infringe on U.S. patents, trademarks, or copyrights. If the ITC determines that a violation exists, the U.S. Customs Service is then charged to enforce an exclusive order, that is, to stop the article from entering the United States or, upon a subsequent violation, the property may be seized and forfeited to the U.S. government. Since 1972, 505 individual cases of alleged IPR violations have been filed against non-U.S. firms in forty countries. Over 70 percent of these section 337 cases were decided in favor of the complainant (Chiang, 2004). Unlike antidumping and countervailing cases where domestic injury must be proved, the U.S. Department of Commerce does not play a role in such cases.

Section 301 of the 1974 U.S. Trade Act contains significant measures to ensure trade compliance. It allows the United States to apply trade sanctions on countries that impose an unjustifiable burden on or restrict U.S. commerce. These include but are not limited to denial of fair and equitable market

### **INTERNATIONAL PERSPECTIVE 20.1. Some Red Flags for IPRs**

- Importer is known to buy infringing goods and has a history of enforcement actions for IPR violations
- Merchandise is shipped in small quantities on informal entries
- Merchandise is imported from sources (countries and/or vendors) with IPR problems
- Company documents show IPR identifier but the company does not have a license agreement with the owner of IPR
- Invoices with no model or catalog numbers and merchandise without lot numbers, factory codes, expiration dates, or dates of manufacture
- Payment term is COD rather than letter of credit
- Shipment is under-insured
- Vague or unusual shipment terms, unusually high or low value for the merchandise

opportunities such as denial of most-favored nation treatment (MFN) to U.S. goods and services, lack of adequate and effective protection of IPRs (including those that are members of TRIPs), export targeting, and denial of workers' rights. A Section-301 investigation may be commenced by the U.S. Trade Representative's Office (USTR) or any interested party that files a petition with the USTR. The USTR must conclude its investigation within a certain period after initiation of an investigation. It may authorize retaliatory action against the foreign country (see International Perspective 20.2).

Special 301 focuses on unfair IPR practices. The Special 301 Provision of the 1988 Omnibus Trade and Competitiveness Act requires the USTR to identify (by April 30 of each year) countries that fail to provide adequate protection and enforcement for IPRs or deny fair and equitable market access to persons that rely on IPR protection. The USTR classifies countries that fail to provide adequate protection or enforcement into the following three categories.

#### *Priority Foreign Countries*

A country may be designated as a priority foreign country if:

- Its policies or practices have the greatest adverse impact (actual or potential) on the relevant U.S. products
- It is not engaged in good faith negotiations to address these problems

## INTERNATIONAL PERSPECTIVE 20.2. Protection and Enforcement of IPRs: Selected Countries

*Argentina:* The National Intellectual Property Institute (INPI) has begun to approve patents for pharmaceutical products. The service has been extremely slow for issuing patents to products with commercial value. The copyright laws in Argentina generally provide adequate protection, mostly due to the government's ratification of the World Intellectual Property Organization Copyright Treaty. However, this is not enough as recorded music, videos, books, and computer software products continue to be pirated. Currently, the country is under the Special 301 Priority Watch List due to its lack of enforcement of IPRs.

*India:* India is working to provide product patent protection to drugs, food, agricultural, and chemical substances. The government passed a patent protection ordinance in 2004, which has proved to be a successful measure. India has passed a copyright law in 2000, yet the broadly defined amendments in the Indian Copyright Act allow for increased piracy of films, popular fiction works, cable television shows, and certain textbooks. The United States has placed India on their Special 301 Priority Watch List.

*Japan:* There is inadequate protection for trademarks and trade secrets. Software piracy is widespread and the narrow interpretation of patents by domestic courts has allowed local competitors to conduct activity that violates the rights of legitimate patent owners. In order for enforcement to take place on copyrighted and patented products, all trademarks must be registered. Any delays in the registration process makes enforcement difficult and open the door to piracy.

*China:* Inadequate protection and enforcement of IPRs has led to widespread sale of counterfeit/pirated goods. China continues to take measures to provide for adequate protection and enforcement of IPRs. The United States has placed China on their Special 301 Priority Watch List. Despite efforts to protect IPRs, there is a lack of coordination and effort among China's government, agencies, and ministries. There are also problems with local protection of pirates, lack of training, and high corruption.

*Source:* U.S. Trade Representative (USTR), 2006.

U.S. Customs has the authority to exclude the importation of imports that violate IPRs. Intellectual property rights (patents, trademarks, etc.) subject to protection have to be registered with the U.S. Patent and Trademark Office. Customs monitors imports to prevent the importation of violating articles based on the IPR owner's request or on the Customs' initiative. Customs regulations establish the authority for trademarks, trade names, and copyright

to be recorded with Customs; to seize counterfeit articles that violate IPRs; and to restrict the importation of gray market imports. The port director has the authority to demand the redelivery of violating articles and to claim liquidated damages in the event of failure to redeliver the goods. Customs also monitors importations of articles (for a fee) on a nationwide basis and reports to the patent holder the names and addresses of importers of infringing goods.

U.S. Trade Representative is required to initiate a Section 301 investigation within thirty days after identification of a priority foreign country. If negotiations are not successful within six to nine months, the USTR may retaliate against the exports of the country by withdrawing trade agreement concessions and imposing duties or other restrictions on imports. In 2006, no country was identified under this category.

### *Priority Watch List*

In this category are countries whose protection and enforcement of IPRs warrants close monitoring and resolution. The 2006 list of countries under this category includes Argentina, Brazil, China, Egypt, India, and Russia.

### *Watch List*

This category includes a list of countries that warrant special attention because they maintain certain practices or barriers to market access for intellectual property products that are of particular concern. The 2006 list includes Bahamas, Belarus, Bolivia, Bulgaria, Canada, and Chile.

The 2006 review emphasized a number of critical issues: proper and timely implementation of the WTO TRIPs agreement; cracking down on pirated production of optical media such as CDs, VCDs, and CD-ROMs in a number of countries including China, India, and Russia. These include physical and virtual marketplaces for pirated goods (the USTR has begun to implement the Administration's strategy of targeting organized piracy) and ensuring that government ministries only use authorized software. The U.S. government also uses different mechanisms to advance the protection of IPRs: negotiation of free trade agreements and withdrawal of trade preferences such as the general scheme of preference (GSP) if beneficiaries do not provide adequate protection to IPRs (USTR, 2006).

It is important to note that a Special 301 investigation is similar to an investigation initiated in response to an industry Section 301 petition (unfair foreign trade practices), except that the maximum time for the latter is shorter (in cases involving violation of TRIPs) than other Section 301 investigations.



Special 301 is potentially an effective tool to protect U.S. IPRs abroad because it allows the administration to use a variety of trade sanctions (e.g., removal of GSP or MFN status) against a priority foreign country. However, its implementation has been sporadic and inconsistent over the years. For example, certain countries with gross violations of IPRs are not added under the priority country list and in some cases, when identified, sanctions are not imposed. Russia was classified under the “Watch List” category for many years in spite of its rampant black markets in videocassettes, films, music, and so forth. India was classified under the “Priority Foreign Country” category several times; however, no sanctions were imposed even though there was no resolution of the problem through bilateral negotiations.

## ***INTERNATIONAL/REGIONAL PROTECTION***

### ***The Paris Convention***

The Paris Convention is used in connection with two separate treaties: (1) international protection of industrial property and (2) international copyright protection (the Universal Copyright Convention). The Paris Convention for the protection of industrial property was concluded in 1883 and has gone through various revisions. It applies to industrial property in the widest sense, including patents, trademarks, trade names, and so on. The treaty sets forth three fundamental rules:

1. *National treatment*: The principle of national treatment provides that nationals of any signatory nation shall enjoy in all other countries of the Union the advantages that each nation’s laws grant to its own nationals.
2. *Right of priority*: The right of priority enables any resident or national of a member country to apply for protection in any other member state of the convention within a certain period of time (twelve months for patents and six months for trademarks and industrial designs) after filing the first application in one of the member states to the treaty. These later applications will then be regarded as if they had been filed on the same day as the first application. A major advantage of this is that applicants wishing protection in multiple countries need not file all applications at the same time but have six to twelve months from the first application to decide in which countries to apply for protection.
3. *Minimum standards*: The convention lays down minimum standards common to all member countries.

### ***The Universal Copyright Convention***

The convention (1952, revised in 1971) establishes the national treatment standard and minimum rules common to all member countries. It also allows countries to set formalities or conditions for the acquisition or enjoyment of copyright in respect to works first published in its country or works of its nationals wherever published.

The Paris Convention is administered by the World Intellectual Property Organization (WIPO), whose mission is to promote the protection of intellectual property throughout the world. World Intellectual Property Organization membership includes more than 130 countries.

### ***The Patent Cooperation Treaty***

The Patent Cooperation Treaty (PCT) allows for a single application and a worldwide search for novelty in all member countries; that is, a search is made in one of the designated offices based on a single application without the need to file applications in all other member states. The application with the search report will be forwarded to the countries where the applicant seeks patent protection. Although such a system eliminates duplication of filing and patent examination in each patent office of a member country, each country retains full jurisdiction to grant or refuse a patent in accordance with its own domestic legislation. The PCT has been signed by 133 countries and regional patent systems such as the European Patent Office (EPO) and the African Regional Industrial Property Organization (ARIPO).

### ***Trade-Related Aspects of IPRs (TRIPS)***

The developed countries criticize the intellectual property conventions administered by WIPO because their minimum standards are considered insufficient and they contain no provisions for dispute settlement. Member states retain broad discretion in granting IPRs. Existing multilateral treaties failed to protect the most basic rights: certain fields of patentable technologies such as pharmaceuticals, biotechnology, agricultural chemicals, and copyrightable documents such as education materials, have been excluded from protection in many countries. Some countries limit patentability to the process (not the product), and/or limit the duration of patent protection.

They contend that the deficiencies in the protection of IPRs distort international trade and reduce the value of concessions negotiated in various

rounds of trade negotiations. The Intellectual Property Committee (IPC), a cross-industry organization of large multinational corporations, notes that:

Inadequate international protection of intellectual property has become a major cause of distortions in the international trading system—and that it is both appropriate and necessary for intellectual property issues to be dealt with under international trade rules. (Gad, 2003, p. 676)

Subsequent negotiations led to the adoption of the Uruguay Round Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) in 1994. The agreement established multilateral obligations for the protection and enforcement of the IPRs and provided a dispute settlement mechanism under the WTO.

The TRIPS agreement covers almost all forms of intellectual property including patents, trade and service marks, industrial designs, trade secrets, and layout designs of integrated circuits.

The three fundamental features of the agreement are:

1. *Standards*: The agreement sets out minimum standards of protection to be provided by each member country. It provides broader protections for intellectual property rights by granting the MFN treatment for all signatories. It also requires members to comply with existing agreements such as the Paris Convention and the Berne Convention for the protection of literary and artistic works. It further supplements additional obligations on matters where the pre-existing conventions are silent or inadequate.
2. *Enforcement*: The TRIPS agreement lays down domestic procedures and remedies for the enforcement of IPRs.
3. *Dispute settlement*: The agreement makes disputes between WTO members subject to the WTO's dispute settlement procedures. It also authorizes trade sanctions against noncompliant nations.

### ***Regional Conventions***

The major regional agreement in the area of IPRs is the European Patent Convention (1973), which under a single application may result in the grant of a European patent valid in all member countries. It is a centralized patent granting system administered by the EPO in Munich, Germany, on behalf of member countries. A similar regional organization is the ARIPO, located in Harare, Zimbabwe. It was established in 1976 to grant regional patents having effect in all designated member countries.

## CHAPTER SUMMARY

### ***IPRs***

Intellectual property rights are associated with patents, trademarks, copyrights, trade secrets, and other protective devices granted by the state to facilitate industrial innovation and artistic creation.

### ***Major Issues Pertaining to IPRs and International Trade***

1. The growth of trade in counterfeit goods.
2. Lack of adequate protection and enforcement of IPRs in many countries.
3. The long-term effect of piracy on trade in technology-intensive goods.

### ***U.S. Classification of Countries That Do Not Provide Adequate Protection of IPRs***

1. Priority foreign countries: Countries that do not provide adequate protection to IPRs and whose policies have the greatest adverse impact on U.S. commerce.
2. Priority watch list: Countries that warrant close monitoring and resolution.
3. Watch list: Countries that warrant the special attention.

### ***Regional/International Protection***

#### ***International Protection***

The Paris Convention, the Universal Copyright Convention, the PCT, trade-related aspects of IPRs (the TRIPS) agreement.

#### ***Regional Protection***

The European Patent Office, the ARIPO.

## REVIEW QUESTIONS

1. What is the importance of IPRs to international trade?
2. What are patents? What are the advantages of providing an exclusive (monopoly) right to patent holders?

3. What is the importance of trademarks?
4. Discuss some of the reasons why some inventions are not patented.
5. Explain why piracy of IPRs is a trade barrier.
6. Discuss the level of protection and enforcement of IPRs in Japan and China.
7. What is the right of priority under the Paris Convention?
8. What are the three fundamental principles of the TRIPS agreement?

### ***CASE 20.1. PATENTS AND ACCESS TO LIFESAVING DRUGS***

Under the Uruguay Round Agreement (1995), the jurisdiction of WTO was extended toward the protection of IPRs. The agreement covers a wide range of subjects including patents, copyrights, and trade secrets. It allows trade sanctions against countries that fail to abide by the agreement. As regards the protection of pharmaceutical products, the agreement (Trade-Related Aspects of IPRs or TRIPS) attempts to strike a balance between the short-term benefits of proving lifesaving drugs and the long-term objective of encouraging technological innovation. TRIPS imposes the following obligations on member countries: (1) protection of product or process patents for at least twenty years from the date the patent application was filed; (2) nondiscrimination: members cannot discriminate between different fields of technology, places of invention, and whether the products are imported or locally produced; (3) compulsory licensing: governments are allowed to license someone to produce the patent product or process without the consent of the patent owner. A number of conditions must be met: a license must have been attempted unsuccessfully from the owner under reasonable terms (unless there is a national emergency), payment of adequate remuneration, nonexclusion of license.

Many developing countries were concerned with the potential implications of TRIPS for protecting public health. This issue gained world attention when a number of South African drug companies challenged the legality of the newly enacted legislation which allowed for compulsory licensing of patented pharmaceuticals. The U.S. government also threatened to issue a compulsory license order against Bayer AG unless the company made significant quantities of capsules available (at a lower price) to victims of anthrax. Member countries agreed to interpret the TRIPS agreement in a way that supports public health by promoting access to existing drugs and the creation of new medicines. They also agreed to extend exemptions on pharmaceutical patent protection for least developed countries until 2016.

The TRIPS agreement states that compulsory licensing can only be used to supply the domestic market. This means that (1) countries that produce under compulsory license would be unable to export the drug, and (2) countries that do not have the manufacturing capability could not import it for domestic consumption. In August 2003, WTO members agreed to make it possible for countries to import cheaper generics made under compulsory licenses if they are unable to manufacture the medicines themselves.

### *Questions*

1. Does TRIPS balance the interests of drugs companies with that of consumers in developing countries?
2. What are your suggestions that are acceptable to both parties?