PATENT LAW IN DEVELOPING COUNTRIES

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Abstract

The patent law emerges in developed countries like the United State of America (USA) to preserve intellectual assets as well as to protect the interests of advance technology development and the investors’ profits. This concept has been distributed worldwide; however, it has to be accepted that it is still problematic to entrench particularly on developing countries. The article points out that it is because the international patent system can be perceived as economic chains of colonialism in which directly affects to developing countries’ interests. Subsequently, a total lack of patent harmony would be the most advantageous scenario from the developing country’s position since their key import is information and technology products. Pharmaceutical products, for instance, are hotly dispute. In developing countries the estimation of average spending on remedy is more than in developed countries quintuple. In this regards, developing countries have questioned on their justification to be protected under the patent law due to their relation to humanity – survival and public interest and policy. Although there are a number of attempts throughout international cooperation like the GATT/TRIP or Paris Convention in order to harmonize the issue of patent law, it seems to be difficult to occur. This is because both sides of countries justify their own right to protect their own interests. In other words, the policies justifying the protection of patents in developed countries are not necessarily applicable to developing countries.

Keywords: patent law, intellectual property, property right

Introduction

Patent is one kind of intellectual property right. There are three main reasons for giving protection to the invention under the patent law.

1. “The just reward for the inventor reason” is created for protection in the name of fairness to secure the inventor his just reward. The inventor doesn’t want invent the new inventor for nothing. His invention comes from investment in time, effort and idea. He should get something back from his own invention.

2. “The natural property right” in invention reason is the other reason which based on believe that man should have the natural property rights in his own ideas. The man who invents something by his own idea should be the owner of that thing.

3. “The incentive to invent and to disclose secrets” is the last reason for the creation of the patent law. The industrial development which comes from the new invention is desirable to every society but can not be obtained if inventors keep inventions secret. Therefore, the most effective way for society to secure these inventions is to grant temporary monopolies in the form of exclusive patent rights in invention.
From the above reason, it creates many important policies for the government to provide patent protection to its citizens. In the absence of intervention by a governmental entity, it would otherwise be difficult for an individual to practice an invention and to maintain rights to that invention without its unauthorized use by others, unless the invention is something that is difficult to reverse-engineer and copy.\(^2\)

The purpose of patent protection is to serve the interests of society and to advance technology development and their investors depend on the prospect of recovering such costs by the potential of reaping future profits under the umbrella of a temporary patent monopoly\(^3\). Patent protection provides some certainty to those incurring research and development costs by providing a limited monopoly under which the inventor and his supporters can implement their technology to recoup their development efforts and to reap a financial benefit as an incentive to yet further development especially when the competition is reduced\(^4\).

Development countries generally believe that a patent system provides the best overall to encourage invention. All economies will benefit from an increased number of inventions. However, there are still some inherently competing interests on both the national and international levels for providing patent protection. On the national level, there is the conflict between the right of the inventor to his invention versus the public interest if promoting technological and economic development\(^5\). On the international level, there are the conflicts which arise from the competing interests which the national entity has in providing national patent protection versus the interests of the international community in unrestricted trade and technology transfers. In the perspective of the U.S., it is recognized that intellectual property rights are critically important in preserving or regaining its competitive advantage because most of U.S. export are the information and technology products.

**Why need to harmonize the patent law**

In today’s world, goods and technology constantly flow across national borders. The world commerce is now interdependent. However, the patent right is just only territorial right, which stop at the border of the nation. The existing fragmented system of national patent laws and patent offices creates roadblocks for international trade. These things make the piracy of intellectual property more increasing, particularly in the Third World and the piracy underscores the increasing conflicts of the rights of intellectual property owners in the developed world with the economic goals of the developing world\(^6\). The patent harmonization is the only way to achieve the goal of protection for the invention abroad. The world trade system now needs the standard of rule and enforcement of IP. Law in each country, because of commerce in intellectual property, has become an even greater component of trade between nations. The multinational corporations and those involved in international trade and technology transfers need the certainty and stability that effective patent harmonization can bring. The harmonization cannot be occurred if it lacks of the establishing a need for international cooperation like TRIPS or Paris Convention. The three most important impediments for patent law harmonization are as follows:

1. The reluctance of national government to give up their current systems which allow them to use their patent laws to favor domestic entrepreneurs. The national government seeks to control its patent system because of the control it provides over technological and economic development for its own country.

2. The relinquishment of a portion of national sovereignty for the sake of a global system. This is a nationalistic and protectionist tendency to resist pressures for change their
own law from outside the national borders. Sovereign nations have always had their own ideas about what rights, if any, they wish to recognize or to confer on those who invest time, capital and energy in creativity, innovation and enterprise.

3. The reconciliation of the different national interests of the developing countries and the developed countries.

4. There is a widespread belief that uniform enforcement of intellectual property rights would benefit the US because such enforcement can motivate attempts to protect U.S. intellectual property rights. When foreign countries use U.S. intellectual property without compensating U.S. owners, the U.S. may either lose sales or be deprived of royalties at a time when an increased foreign trade is vital to the U.S. economy. The developed countries believe patent law can lead to economic development due to the cost of the royalties from developing countries.

The perspective of U.S. to the pharmaceutical patent in developing countries
Effective patent protection at home and abroad is very vitally important to the United States pharmaceutical industry. America’s research-based pharmaceutical companies pour millions of dollars into the research and development of new technology every year. There is little incentive to provide an ever-increasing commitment to research unless there are reasonable expectations of financial return. Only effective patent protection provides the incentive necessary to enable pharmaceutical companies to commit the required resources.

There are two kinds of pharmaceutical companies: research-based companies and imitators that do not carry out substantial research on their own but profit from the fruits of the research of others. Pharmaceutical research is extremely costly and time consuming. It is driven by the objective of discovering new and improved drugs and securing their marketing approval from health and regulatory authorities on a country-by-country basis. There are a lot of investment and effort required for pharmaceutical research and marketing approval. The research-based U.S. Pharmaceutical companies cannot exist without the limited period of exclusivity of market position that an effective patent system presumably assures. The U.S. market alone is insufficient to assure a reasonable return on investment to research-based pharmaceutical companies. So, these companies have to operate on a multinational basis to recoup their investment. The worldwide patent system is the only way to survive of the U.S. pharmaceutical companies.

While the developed countries would benefit from granting and enforcing patents on pharmaceuticals, many countries, including most third world nations, do not grant patent for inventions in agriculture and medicine. These countries may fear drastic price increases that would result from paying royalties on patented pharmaceutical and agricultural technology as well as a loss of control over technology that is vital to national developments. The Thai Patent Act 1979, before its recent revision in 1992, served as a typical example of the limitations developing countries place on their patent laws. There is the reason for the U.S. for objection to the several provisions of the 1979 act especially in the article 9 which excluded pharmaceutical, agricultural, and biological products from patent protection. There are many efforts of the U.S. including using trade sanction [section 301] to force Thailand to change Thai Patent Act 1979 which exclude patent protection on pharmaceutical. Trade sanctions were imposed on the Thai products sought to be imported into the United States. The United States’ effort to force unilaterally a change in Thailand’s pharmaceutical patent appeared to have succeeded. The imbalance in trade of the United States is one of reasons to
force the changing of the Thai Patent Act. In 1990s, the U. S. has become the world’s largest debtor nation.\textsuperscript{12}

The U. S. believe enforcing intellectual property rights in foreign countries can reduce the trade deficit by increasing competitiveness of domestic products overseas in two ways: (1) by increasing the price of foreign goods to cover royalties that foreign manufacturers must pay; and (2) by decreasing the quality of foreign goods by denying foreign manufacturers access to protected U.S. technology. Royalties paid for use of U.S. intellectual property directly decrease the trade deficit. These imbalances have increased pressure within the U.S. to adopt the technological protectionism like to force other countries to respect intellectual property rights, contrary to the policy of free trade.\textsuperscript{13} A study by the Pharmaceutical Manufacturers Association reported that, in 1984, unauthorized sales of patented U.S. pharmaceuticals by local firms in just five foreign countries amounted to $ 192 million, while the concomitant sales by U. S. firms were only $ 162 million.\textsuperscript{14} The estimates are based on data voluntarily submitted by industries that would benefit from a protectionist trade policy.\textsuperscript{15} These businesses may exaggerate their losses to persuade Congress to increase trade barrier. So, the benefits from enforcing U. S. intellectual property rights are probably smaller than originally perceived. Most Third World countries may affect the trade imbalance as the United States after adopting intellectual property law in their countries. The negative balance of trade is exacerbated by the higher prices of import goods that are caused by import monopolies enjoyed by foreign enterprises in the form of patents.\textsuperscript{16} The negative balance of trade may come from the local company cannot sell the patented invention within home country or compete in the export market, even in countries where the patented invention is not protected.\textsuperscript{17}

The reasons why developing countries need to grant patent protection to foreign inventions such as pharmaceuticals

1. Foreign companies would increase their investment in production and research and development of high technology pharmaceuticals within the developing countries. By condoning piracy, the developing country destroys the incentive for its own national to create intellectual property.

2. Transfer technology is extremely important to the development of developing countries. Foreign companies would increase the transfer of pharmaceutical technology to the developing countries. Without adequate protection intellectual property protection, companies from developed countries will reluctance to transfer technology to the developing countries.

3. Foreign companies would make a variety of important new drugs available to the people of the developing countries. And domestic R&D of pharmaceutical would be stimulated

The overview of developing countries about the patent law
Most developing countries believe that it is economically unsound for such countries to have a patent system if an overwhelming majority of patents are granted to foreigner\textsuperscript{18} the costs and benefits of a patent system can be different for a developing country than they are for an industrialized country. A primary economic goal for many developing nations is to increase the standard of living of their people by encouraging Western-Style economic development.
often through the use of western technology. Thus, the mechanics and costs of technology transfer have caused much friction between developed and developing countries. If a developing country grants legal recognition to foreign patents, it would have no legal way to use patented technology without paying royalties to the patent owner. If the economy of the country is weak, there may be insufficient foreign currency reserves to pay the royalties and provide essential services. Thus, there can be great pressure for the country to appropriate the patent or to condone the pirating of the patent by its citizen especially in the field of agriculture product and medicine.

Piracy can promote the development by making valuable technologies available at a minimum cost. Developing countries maintain the intellectual property rights are the common heritage of mankind and therefore should be made available to all countries in low cost\textsuperscript{19}. They view that what could have been obtained for free must now be paid for the price demanded by the patent owners who are the sole source of patented inventions. Even if licensed to others, the royalty-enhanced price must be paid.\textsuperscript{20} It is the reality that very few inventions are made by nationals of developing countries. So it will be the cost of the developing countries to force the patent right just only for the foreigner’s invention\textsuperscript{21}.

**Is it a real benefit for adopting pharmaceutical patent in developing country?**

The promise by the U.S. pharmaceutical industry to increase in local R&D and production facilities may be illusory. There is no guarantee that new plants would be built in Thailand. The overwhelming majority of foreign patents register in developing countries are never worked by their owners. This registration is thus solely intended to prevent the introduction of closely competitive domestic inventions and more importantly, to block the entry of competitors into that market\textsuperscript{22}. This is called the blocking patents. The blocking patents occur when companies invest resources to secure patents in a given product area to preclude competitors from marketing those inventions, while have no intent to market or use such inventions themselves\textsuperscript{23}. It makes more difficult for competitors to market within this blocked patent area, thereby denying consumers access to competing products. It will harm to the social net benefit. Thus the principal function of patent is seen as not to encourage inventive activity but to aid profit through minimize the competitors. It is also unlikely that Thailand would receive much R&D funding from the U.S., because Thailand lacks trained technicians and other infrastructure necessary for commercial pharmaceutical research\textsuperscript{24}. Pharmaceutical patents would probably be worked in Thailand only because the Thailand Patent Act contains compulsory licensing provisions. For the reason of technology transfer, as long as Thai companies already manufacture these drugs, technology transfer from the U.S. is unnecessary because Thailand must already have the necessary technology. As for drugs that Thailand imports from other pirating countries, these violating countries can probably provide the technology more cheaply than can the U.S. However, the complex technology necessary to produce certain high technology pharmaceutical may be an exception.

Granting pharmaceutical patents will not necessarily guarantee the availability of important new drugs. These drugs are unusually expensive because of high R&D and manufacturing costs. The low average wages in Thailand would seem to limit the market for such drugs because their price is beyond the means of the average consumer\textsuperscript{25}. Therefore, U. S. pharmaceutical companies will probably not refuse to sell these drugs to the small number of Thais who can afford them. Thus, granting patents may not actually result in increased availability of new drugs. It is possible, however, that granting pharmaceutical patents would increase the quality of the available drugs. The extensive regulations that ensure the high
quality of U. S. pharmaceuticals do not control manufacturers of counterfeit drugs. It is important to note that competitive strategies force research of pharmaceutical company do not rely only on patents, but also on other mean of appropriating returns for invention efforts, such as secrecy, being first on the market, and the possibility of developing source recognition of the product [product differentiate]26. These nonpatent incentives may well provide adequate inducement for many types of inventions, which may be categorized as nonpatent-induced inventions37.

Patent system also have attendant costs, such as the expenses of the patent system bureaucracy, price increases in patented products that would have been invented without the patent system, and inefficient allocation of research funds by patent –seeking corporations. The decision to grant patent protection for any or all classes of invention should be based on the balancing of the cost and benefits factors. The most significant cost of granting patents would be the increased prices of drugs that are already available in a pirated form. The increased prices come from the royalties paid to the patent owners. The effect of overpricing by patentees is to worsen the relative balance of trade between developing and developed countries28. Additional costs in Thailand would include loss of jobs and other economic benefits from the local manufacture of pirated drugs. It must be justifies the balance between having the new invention and the cost which Thailand must pay for the patent protection. Some Third World countries, however, view the developed countries ’attempts to enforce intellectual property as a continuation of colonialist policies in which the developed countries control the economic future of the lesser-developed nations by allocating technology and extracting exorbitant royalties in return29.

Piracy was considered to be the natural marketplace response to the high prices, as well as a practical means of obtaining necessary. In addition, many developing countries believe that developed countries have an obligation to aid the development of poorer countries rather than retarding their growth through restrictive intellectual property policies30. If patents are granted for a wide range of statutory classes of inventions, there is no particular incentive to induce inventions needed by that country. The incentive, rather, is to obtain a patent in that country in order to control the market in those goods that create the maximum profit to the foreign patent owners31.

Price increases in the drugs will divert needed funds from vital development projects, the entire rate of growth of the rapidly developing Thai economy could be hindered. Trade between the U.S. and Thailand will decrease. It is unrealistic to claim that the piracy of patented drugs by Thailand or other developing countries will discourage the development of new drugs in the U.S. the risk – benefit analyses that lead companies to fund the development of currently patented pharmaceuticals were made with the full knowledge of the fact that many countries do not recognize patents on pharmaceuticals. Thus, consumers in the developed countries covered the cost without expecting any contributions from the Third World32. The goal of the United States in international trade should be to increase the benefits to its own economy. This can be attained by maximizing the volume of foreign trade and by maximizing the royalties U.S. citizens receive from the international use of their intellectual property. Retaliatory trade policies and other efforts to coerce the premature adoption of intellectual property protection can damage developing economies and run counter to the overall U.S. goals. This is especially true where the intellectual property in question is pharmaceutical patents. Forcing a developing country to honor pharmaceutical patents prematurely could directly damage the health of the country’s citizen as well as its economy. Different countries exist in different stages of economic and technological development.
Intellectual property standards developed by an advanced country might not fit the needs of a developing country. There are other factors beyond the availability of patent system that enter into a decision about whether to invest in particular developing countries. The political stability such as South Africa where has the strong patent system. It is very hard to induce much of foreign investment. The labor and material are the other factors for the competitive cost of foreign investment. The last factor is the investor will make the determination based on whether a particular invention could be made efficiently and profitably within a given developing country.

Is the theory of patent law still true in today’s world?

Every economic rationale of patent property right is based on a certain set of assumptions. If an argument for patent property rights is valid for a set of assumptions, it is valid for a period during which those assumptions are correct. When assumptions do not coincide with the reality of changing time, the argument will also lose its validity. The patent system still based on the assumption that an incentive should be offered for the creation of inventions and that exclusivity is the best incentive. Despite the 500-year history of patent system, it is still extremely difficult to ascertain whether a patent system actually results in a net social benefit to a developed country. The patent property rights were designed for individual and independent inventors. At turn of the 20th century, in the U.S. some writers assumed that inventions are generated by motive such as instinct for contrivance or creative curiosity, rather than by a search for profit. It is evident that there are a significant number of inventions that would be made irrespective of the availability of patent protection. The aphorism that “the necessity is the mother of the invention” undoubtedly reflects reality. On this ground, it can concluded that the patent system is a huge mistake.

The subject matter of patent property rights is constantly changing. Not only are the issues of patent rights changing in response to technological and social changes, but the economies are themselves changing. The structure of the British economy, for example, is very different now from the way it was at the time of Adam Smith was arguing for the patent rights. Furthermore, human behavior itself cannot be assumed to be unchanging: as inventors become aware of new and other means of appropriating returns for inventive efforts they may alter their behavior simply by not relying only on patents. Historically, nearly all inventive activity was carried out by individual inventors working more or less alone, without formal organizational attachments. But over the years, radical changes have occurred in the technological environment. Changes in the nature of inventive activities, the development of new technologies, the shift from independent, individual inventors to collective invention by research teams employed by scientific organizations, governments or business corporations, the emergence of new and vigorous global competition, the quickening pace of invention and of imitation make the concept of patent changing. The relative importance of independent inventors has been declined. The number of patented granted to individual inventors reach a peak in 1916 and has since declined. The individual inventors became salaried research professionals, hired to work in large firms and large R&D laboratories provided by those who can afford them.

The just reward argument for patent rights was not valid any more because in the past, any inventions was ordinarily the creation of one individual. In today, the team research in the laboratories of the large corporations has largely displaced the inventive activity of the individual. In the organized research, the improvements of various technicians are put together, under the guidance of business managers and lawyers. It is not the inventive act anymore. Inventors are paid salaries or bonuses for the improvement that they create. The just
reward rationale for inventors should hold in a situation where the inventor become entrepreneur. The legal individual, the big research company, should not receive just reward for their acts because the invention did not come from their own inventive.

In the past, many people believe an inventor has a natural property right in his invention. An invention idea remains the exclusive property of the inventor only as long as he keeps it secret. Patent is the particular kind of property rights; they permit their owner to restrict use of idea. If the idea could be subject to the same kind of property right how it is limited to a few years instead of recognized for all time. The intellectual property right was not created from the symptom of scarcity like other kinds of properties. It should not be recognized in its own natural property right. Furthermore, since invention activity has now moved from the free lance individual inventors to the corporate R&D laboratory, the natural property right should not extended to the company because such this right was intended to apply to the individual inventor.

Compulsory license: the conflict between the developing and developed country

The granting of patents also retards the transfer of technology. The foreign patent owner may have little incentive to transfer technical information related to the patented invention if the owner is deriving the significant profits from having an import monopoly on that invention if the patentee can bar domestic production on the basis of the patent. The existence of the patent therefore precludes competition in technology available from the developing countries. The grant of a patent on invention by a developing country does not make the patentee obligated to transfer the technological information the developing country except in the case of compulsory license. The development of developing countries could be happened if there are the actual working of that technology in the developing countries and giving the technical assistance for using that technology. It can be called the learning by doing. This is why the developed countries try to eliminate the compulsory license in the developing countries’ patent law. In the developing countries like Thailand, importing is not considered working the invention. This may come some fear of the developed countries about the rapidly growth of developing countries to be their competitors in the world market.

The perspective of the U.S. to the compulsory license in Thailand

About the compulsory licensing, it is one of the most provisions in the patent law that the U.S. dislike. In the developing countries, importing drugs is not considered working the invention. Pharmaceutical products are complex chemicals, the production of which involves many environmental, safety and regulatory problems. It is technically and economically impractical to build a sophisticated chemical manufacturing plant in each nation in which a manufacturer markets a product. This is especially true in small, developing countries or in countries that lack the requisite industrial infrastructure, technical know-how, work force accustomed to industrial sophistication. Although the consumers may feel that they are overcharged for the patented pharmaceutical products, at least the pharmaceutical is available for purchase because of importation. Many pharmaceuticals would not exist but for the profit incentive.

Conclusion

The policies justifying the protection of patents in developed countries are not necessarily applicable to developing countries. The level of economic development of a country may determine the type of intellectual property that is profitable for a country to grant. A total lack of patent harmony would be the most advantageous scenario form the developing country’s
viewpoint. Limited purchasing power should function as a self-regulating mechanism to prevent price increases by forcing pharmaceutical manufacturers to choose either a low sales volume and a high unit cost or a high sales volume and a low unit cost. This theory may be true for the other products. However, the drugs are very important factor like the food for human to survive. Even though it will be expensive, everybody will try to do everything whether it is illegal way to get the money to purchase the drug. Moreover, the characteristic of drug is different than that of the other products. The familiarity to consume (like the brand name of drug) is one of the factors to purchase the drug. Even after the patent term for the drug expired, it rarely finds the changing behavior of consumer to consume the new drug which is cheaper or more efficiency. This will decrease the degree of the competition in the market which will affect to the development of the developing countries. While the average spending on drugs in the developed world has been estimated at 8 percent of health spending, it is thought to be 40 percent in developing country. Health care, and it cost, also provokes strong emotions. When someone is ill, they and their relatives and friends, demand a cure. If a remedy exists, quibbling about payment is hardly the issue. Developing countries have been freed from the political chains of colonialism; nonetheless, in many instances, economic chains of colonialism still remain. The international patent system is one of the links in these chains. Under the GATT/TRIPS, it would remain to be seen whether an effective mechanism for enforcement could actually be achieved because implementation and enforcement would still be left to the discretion of each individual nation. This may be the method for the developing country to protect their own interests. The other is in the Article 27 of GATT/TRIPS which it contains a broad escape which would permit each contracting nation to exclude from patent protection essentially whatever could be justified on the policy grounds of that contracting nation. The problem created by this article is that it arms the developing countries with grounds for excluding from patent ability important technology areas such as pharmaceuticals, chemicals, computers simply on the presence of public policy. This exclusion is significant because many of the developing countries espouse the belief that many of these technologies are per se against public policy and beyond patent protection.

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