Economic and Legal Aspects of Patent System: Approaching of the Republic of the Union of Myanmar

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Abstract

In order to implement the TRIPS’ agreement, the Republic of the Union of Myanmar has been drafting IPR law. Apart from this, the law concerning patent rights is one of the great importance under TRIPS. Pros and cons centered from the economic view for having patent rights are discussed. The paper further discusses the consideration of granting patent rights. If the statutory provisions cannot cover how to grant this right, being there has been no decided case on the patent right in Myanmar, cases either from the European Union or from the United States should be studied because these two communities have been popular in dealing with patent issues. This paper views that the Republic of the Union of Myanmar is on the right path to having the consolidated intellectual property law that includes Patent Law in the new version.

Keywords: Intellectual Property, Patent, and Myanmar Patent

INTRODUCTION

Medieval Venetian State is the first nation to recognize the intellectual property right. Gradually IPR has been globally recognized. Then, the World Intellectual Property Organization (WIPO) categorized intellectual property into two main branches: industrial property and copyright. Industrial property includes patents and other rights in technological inventions, rights in trademarks, industrial designs, the appellation of origin, etc. Copyrights include rights in literacy, musical and artistic works, films, the performance of performing artists, phonograms, etc. Thus, the patent falls under the category of industrial property. Intellectual property right (IPR) is granted for human creation by using their technology, incent, or know-how. Since the aim of granting such rights are to award the creator and at the same time not to permanently restrict for that only one creator, it is usually granted as a temporary right. For example, time generally granted for a patent is only 20 years.

Currently, IPR has become a standard component of the international trade agreement among the World Trade Organization (WTO) member countries. WTO agreed on Trade-Related Aspects of Intellectual Property Rights (TRIPS). Myanmar has been a member of WTO since 1995 and of WIPO in 2001. Thus, either being a WTO or WIPO member country, the Republic of the Union of Myanmar has to implement TRIPS’ agreement first. The Republic of the Union of Myanmar following the TRIPS agreement is required to pass all kinds of IPR related laws starting from the beginning of 2006 according to the TRIPS agreement. To wrap up, Myanmar targeted to publish the IPR law by 2013. Nevertheless, the time is not ripe for Myanmar to implement TRIPS’ agreement regarded with IPR.

We already have thirteen kinds of both enforcing and non-enforcing IPR laws. The Myanmar Patent Act was codified in Myanmar Code Vol. X was repealed due to its unharmonious provisions with
the international agreement. Likewise, the India Patents and Designs Act, 1911 which enforces Myanmar is an updated one now. Thus, the Office of the Attorney General and the Ministry of Information and Communication draft the Law and promulgated a Patent Law in 2019 by the Pyidaungsu Hluttaw (Union Parliament).

In order to contribute to studying the patent system, the paper describes the perspectives of three international organizations (TRIPS, WIPO, and OECD Organization for Economic Co-operation and Development). Then, patent systems in the EU and the U.S. are explored. Some cases on patentability and non-patentability from European Union (EU) and the United States (the U.S.) are also analyzed. The syllogism relating to the Myanmar Patent system is finally included as the outcome of the paper.

**METHODOLOGY**

Since this paper envisages the patent system in Myanmar, the sources of the patent system that arose from the international conventions and treaties are studied to consider how the Myanmar patent statute should be. The perspectives of TRIPS, WIPO, and OECD are traced to realize the value of the patent. Then, this paper discusses how the EU, the U.S., and the Republic of the Union of Myanmar view the patent system. Furthermore, according to the lessons learned from the EU and the U.S., just applying only the patent statute cannot settle all of the patent issues. Thus, the archival cases from the European Court of Justice, the federal circuit court, and court of appeal in the U.S. are studied and analyzed. At last, the paper looks for the existing Myanmar Patent Law. This paper is categorized as a qualitative research paper using conventions, treaties, the Acts, the Charter, and judgments of the courts. Moreover, law digests and books are used as secondary sources for getting through the scope of the statutes.

**FINDINGS**

TRIPS, WIPO, and OECD view that Intellectual Property rights including the right to patent are a tool for the contribution of economic development. Not only did these international organizations but also some writers – as many as this paper could be able to review – suggest that the patent system would bring economic wealth and technology transfer. Likewise, Myanmar IP writers viewed that the Republic of the Union of Myanmar was in need of IP related laws including patent law for economic contribution and technology transfer. At the same time, the Union has to endeavor to promote inventions. Studying the legal cases from the EU and the U.S., this paper finds that the overall system of the EU patent is better taken as an example to be studied.

**DISCUSSIONS**

**PATENT SYSTEM IN TRIPS**

Desiring to reduce deceiving and obstructions to international trade, and taking into account it is necessary to promote effective and adequate protection of intellectual property rights, and to make sure that ways and procedures to enforce intellectual property rights do not themselves become barriers to legitimate trade, members of WTO set up an agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).

In accordance with TRIPS, intellectual property related issues were adopted by the Paris Convention, the Berne Convention, the Rome Convention, and the Treaty on Intellectual Property in Respect of Integrated Circuits. Therefore, TRIPS is the principal agreement which set out the guidelines in adopting IP related regulations for IP grown country to follow.

**WORLD INTELLECTUAL PROPERTY ORGANIZATION (WIPO)**

WIPO Patent Information Services for the Developing Country published by WIPO also adopted the guidelines for developing countries. According to this publication, the patent system has the give and take functions. It performed a giving function in the sense that it gave an inventor an exclusive right on a piece of special knowledge and deserved taking function in that it could limit opportunities of access to this special technology for other businesses. WIPO was of the view that each publication of a patent document could be the base for new technical development by other inventors; without
publication, there would be no chance at all for the public to get information about new technology development. Ultimately, WIPO rose that the IP system contributed to economic growth and development by creating the conditions for the marketing and commercialization of inventions in several ways. WIPO led to conceive that each country should have an IP right as an incentive to promote economic process and social welfare.

ORGANIZATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (OECD)

OECD Patent Statistics Manuals also stated that the legal foundations of patents are provided in Article 28 of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement. According to this section even if another person can invent the same thing as the patented thing, a person who already got a patent license can prohibit the other person from using or marketing the same thing with the patented thing. However, using or marketing can be done under the approval of the patent owner. Thus, OECD provides that patent owners can receive economic incentives from her creation.

PROS OF PATENT

Guellec and Potterie described the importance of the patent. They viewed that patent right was one of the reasonable means to limit competition. It is that producers could restrict competition and charge the customers a markup of the price by patent. Their view also led that patent rights that could block imitation products. Without identifying for patent rights, competitors could imitate the products and offered the artifacts to the consumers at a lower price than the inventor’s price in the same market. They even pointed out that the existence of patent rights could prevent illegal entry into the market.

Nonetheless, Guellec and Potterie then traced the downside of the patent. They raised that the patent was created due to the intensity of competition. Patent holders could use the exclusion right in the market, and fight against all the competitors. However, if the patent holders used a patent tool and marked up a price higher than the marginal price, then there would be patent downward. For example, if the price of the product was not increased, the consumers were ready to pay for that price. However, the producer sets the price higher than the real total cost by using the patent instrument. The deadweight loss was in place because of unnecessary price increases resulting from the patent cost added to production cost. The deadweight loss was good for nothing to both producers and consumers. Guellec and Potterie alerted the patent holder that using patent rights as monopoly power and fixing the price higher in a homogeneous market was not beneficial to the producers though.

However, Guellec and Potterie showed the way to open patent downside. They differentiated between static inefficiency and dynamic efficiency. Patent right that bears monopoly power can create stationary inefficiency. They meant that patent holders using the static way caused economic inefficiency whilst using a dynamic way can bring economic efficiency. They also viewed that patents were a double-edged sword concerning exclusive rights and the diffusion of technology. Patent documents must include a clear description of the invention and such description must otherwise be kept secret. On the other hand, patents erected barriers to the use of knowledge, which became more expensive as third parties have to pay fees to use the patented invention. However, it was irrelevant in the case of inventions which should have been publicized. Hence, Guellec and Potterie were also of the view that patent policy is to maximize the benefit and minimize the costs for society.

Guellec and Potterie were not of the negative view upon having patent rights although they described that patent being a monopoly power and governments were hesitant to grant it. Since patent could constraint competition, where there would be concerns between patent and competition policies the two groups of authorities should join hands. In fact, the patent was an incentive to innovate. Further, innovation can lead to advanced products at a lower cost. By using an innovation tool, the producer does not need to mark up a higher price because of the added value (fee for the patent) adding to the resources cost and the production cost. To reap up, Guellec and Potterie were pros to the patent regime.

David A. Burge viewed that patent was a contract between the government and a patentee rather than a grant by the government to an individual. If a patent was viewed as a grant there would be the
danger that it tended to be thought of as a gift from the government to an inventor. What is more, a very misunderstanding associated with the grant of the patent was that it conferred a monopoly on an inventor. The reason that patent created a monopoly and the authority was seldom granting the right was almost universally to think that it was wrong. Further, the patent was rarely covering all of the advanced inventions which could preclude the viable existence of competitors to perform the same function.

David A. Burge then witnessed the conception “if it were not for patents blocking the way of humanity’s progress, we would all be faring better than we are today” was nonsense by confronting with the discovery of penicillin by Sir Alexander Fleming. David A. Burge urged that Fleming’s decision against pursuing patent protection to do his discovery commercialized without hindrance be put into worldwide use as quickly as possible was fatal folly. From this folly, it led that no commercial manufacturers could be found who would make the investment needed to find a way to purify the drug and develop the techniques needed for manufacture. David A. Burge then asserted that patent was a negative right in the sense that it was a right to preclude others from using, making, or selling the invention and not a positive right in the view that patent granted the inventor to make, use, or sell her invention. The author corrected some misconceptions on patent and also upheld that it was a tool to promote the progress of science and useful arts.

**CONS OF PATENT**

Alexander I. Poltorak and Paul J. Lerner described in *Essentials of Licensing Intellectual Property* that granting any IP license was like an event of stick licensing or carrot licensing. The authors suggested having a look at a mule harnessed to a cart. The mule is sluggish and obstinate and has no interest in pulling the cart. The cart’s driver has attached a carrot to a pole and seeks to induce the mule to pull the cart by dangling the carrot just beyond the mule’s reach. In order for the inducement to succeed, the carrot must be attractive to the mule. Unless and until the mule desires the carrot, the cart goes nowhere. Therefore, it is with “voluntary” licensing. No progress is made until the offeree perceives the desirability of the property being offered. On the other hand, such a license, taken involuntarily, under explicit threat of legal action, is known as a stick license according to these authors. Unless the proffered license is taken, the property owner may utilize the courts to righteously beat the infringer with the noble stick of her IP rights.

Then, Daniel J Gervais analyzed that there was a big gap between the nature of IP and its impact in developing economies. He could not simply draw that an increase in trade following the introduction of TRIPS compatible intellectual property protection followed by economic development especially when measured in terms of welfare increased. He also described that Thompson and Rushing showed that IPRs were unlikely to generate positive effects below a certain minimum threshold of economic development. He further pointed out that IPR protection is growth-enhancing in both low and high-income countries, but has only a small positive impact on growth in middle-income countries according to the study by Falvey, Foster, and Greenaway. Nevertheless, he deducted that no significant relationship between the level of intellectual property protection and economic growth was found. However, Daniel J Gervais pointed out that Falvey, Foster, and Greenaway did not find any evidence that introducing intellectual property protection had reduced growth in any country.

Likewise, Burk and Lemley argued that most information technology companies who bought patent licenses would tell in frank that they would be better off without any patent system, or at least with one that was radically changed and that let them alone to innovate. Despite these contentions, the patent laws have to be convergent for all kinds of sectors according to TRIPS’ agreement. However, Burk and Lemley pointed out that even the EU has specialty patent law for each sector. The reason might be that the European community mostly belongs to the civil law family and thus the judicial decision has to be relied only on the statutes. That is why the EU was stated it did not totally follow TRIPS’ agreement in flexibility. The U.S. so flatly belongs to the common law family that it can abide by the TRIPS rule in flexibility. Moreover, the U.S. amending the
first to file system on September 16, 2011, purports the U.S. to become following the agreement.

PATENT IN MYANMAR

The economic development of every State would be captured if there would be a competition in international economics, industries, and commercial transactions. In order to compete with the international level, the intellect-based development was required to be promoted, and the updated system of protection of intellectual property was needed to be installed. Then, there would be development in industrial and intellect-based economic progress. Thus, national law for the protection of intellectual property should be enacted, reviewed, or amended if necessary.

Myanmar had been a member of WTO since its establishment in 1995. It had been obliged to follow by the Trade-Related Aspects of Intellectual Rights (TRIPS) agreement. According to Article 65 of the TRIPS agreement, Myanmar had to finish passing IP law by 2006. However, according to Article 66 (1) of the TRIPS agreement, Myanmar, and other least developed countries (LDC) got the extended time to complete passing by 2013 due to several reasons. As distinctive progress, Myanmar had accessed the World Intellectual Property Organization (WIPO) – the United Nations Specialized Agency – in 2001. Myanmar indeed had co-operated in WIPO for more than a decade.

Besides, Myanmar either is a WIPO member country or is an ASEAN member. It is bound to abide by the ASEAN Agreement on Intellectual Property Cooperation. This makes Myanmar prepare to pass the IP law as the other member countries to some extent. The importance of intellectual properties such as trademark, patent, copyright, and industrial design hits the top in the Union. Only if such rights are protected, can the country persuade foreign investors for investment? Thus, promulgating IP laws is one of the contributing factors in order to promote foreign investment.

Although Myanmar has promulgated the IPR law, it is not enforced. China promulgating IPR laws has to be taken as an example. Chinese passing IP laws could promote its foreign investment. Because China foresaw the benefits of accessing WTO, it entered into this organization and aligned the infrastructure by legal means that would appear to be reliable by foreign countries. China would be surely effective in world politics and the economy with Chinese people’s incredible capacity. Thus, all of the Myanmar IP writers suggested that Myanmar had to have IP consolidated laws in order to contribute to economic development.

PATENTABILITY SUBJECT MATTERS IN EU

The afterward selected cases involved in some cases from 14 EPC contracting states filed in the European Patent Office (EPO) from 2004-2011. They are not of all cases on patent reported by EPO. Cases concerning with patentable novelty (Art. 54, EPC), inventive step (Art. 56, EPC), industrial applicability (Art. 57, EPC), and exceptions to patentability (Art. 53, EPC ) will be excerpted in order to get through how the EPO defined their scopes and applicability.

Human Genome Sciences Inc v Eli Lilly

The case concerned that the ability of the patent or otherwise of a protein called by HGS Neutrokine-α, antibodies to it, and the polynucleotide sequence encoding for it. HGS was to discover its existence firstly, doing so by "bioinformatics." The judge at first case held that all the claims for the patent (EP, UK) 0 939 804) were invalid on three grounds: they were not inclined to industrial application, because of a lack of technical contribution, they were insufficient and they were significant. HGS challenged all these findings.

The Supreme Court acknowledged that there was very little authority in the UK on the topic of industrial applicability and so the applicable principles were to be found in the jurisprudence of the boards of appeal of the EPO. The judge's decision was not consistent with that of the boards concerning the requirements of Art.57 EPC in relation to biological material. The judgment of the Patents Court that the claimed inventions were not disposed of industrial application at the date of the patent was therefore set aside.

Neural Progenitor Cells

The defendant Brüstle, a stem cell researcher, was the proprietor of a German patent for "neural
progenitor cells, methods for producing them and their use in the therapy of neural defects”. Claim 1 of the patent covered isolated, purified progenitor cells with neuronal or glial properties of embryonic stem (“ES”) cells comprising no more than 15% primitive embryonic cells and non-neuronal cells and obtained in several stages: cultivation of ES cells into neural progenitor cells, the proliferation of those latter cells in a serum-free medium containing a growth factor, purification, and isolation. The ES cells were derived from germ cells of the group comprising mice, rats, hamsters, pigs, cows, primates, and humans. The claimant Greenpeace contended that the patent was invalid because it constituted a breach of ordre public and morality in so far as the claims were directed to neural progenitor cells derived from human ES cells.

**PATENTABILITY SUBJECT MATTERS IN THE U.S**

According to 35 U.S.C. §101, whoever wants to invents or discovers any new and useful process, the machine, manufacture, or composition of matter, or any new and useful progress thereof, may obtain a patent therefor, subject to the situations and necessities of this title. Conditions to necessities of this topic concern with the subject matter of the invention: novelty and non-obviousness (utility or usefulness is not the *prima facie* of the subject matter).

**Symbian Ltd v Comptroller General of Patents**

The application at issue, entitled "Mapping dynamic link libraries in a computer device", had been refused by the Comptroller on the ground that it was excluded from patentability, being concern with "a program for a computer ... as such". The Comptroller's decision was overturned by the High Court and the Comptroller appealed. The Court dismissed the appeal, finding that the claimed invention did really make a technical contribution. It did not embody any of the items specifically excluded by other categories in Art.52 EPC. More positively, the instructions could be said to "solve a 'technical' problem lies within the computer itself". The fact that the improvement might be software programmed into the computer rather than hardware forming part of the computer could not make a difference. A computer with this program operated better than a prior-art computer. There was not a basis for holding the contribution not to be technical, given that the contribution in the two claimed inventions in T 6/83 and T 115/85 was held to be technical and thus un-patentable.

**Diamond, Commissioner of Patents and Trademarks v. Chakrabarty**

The patent claimant was unsuccessful in filing a patent for human-made, a genetically engineered bacterium that was capable of breaking down multiple components of crude oil. Therefore, he appealed but did not win the patent. That is why the Supreme Court of the United States issued certiorari to the Patent Office Board of Appeal. The court confirmed the judgment that allowed the respondent's claims. The court rejected the argument of the patent office board of appeals that 35 U.S.C.S Section 101 was not intended to cover living things such as laboratory created micro-organisms. According to the meaning of 35 U.S.C.S. Section 101, the court held that the respondent's micro-organism created a "manufacture" or a "structure of matter" and therefore qualified as a patentable subject matter. Live, man-made micro-organism, held patentable under 35 U.S.C.S section 101.

Therefore, it is pointed out that the interpretation of the statute is the most important and the words in the statute have to be interpreted as taking their ordinarily, contemporary, common meaning. Although the invented bacterium is a living organism, it falls under the category of manufacture or composition of matter, living things occurred as the result of manufacture has been patented under the 35 U.S.C.S. section 101; not under the Patent of Plant and Animal.

**Diamond, Commissioner of Patents And Trademarks V. Diehr et.al**

In this case, the plaintiff filed a patent claim in the United States Court of Patent Office but was rejected by the examiners in the office. Being rejected, the appeal was then filed in the Trademark Office Board of Appeals but defeated. However, the Supreme Court of the United States granted the Certiorari to the United States Court of Customs and Patent Appeals to examine again. Finally, the United States Court of Customs and Patent Appeals grant the patent for a process for curing synthetic rubber, which included in several steps the use of a mathematical formula ( ln v <\text{v}1\text{equ C}Z+x ) and a

http://www.ijmsbr.com
programmed digital computer. It was a patentable subject matter under 35 U.S.C.S. § 101. The Supreme Court affirmed the judgment of the Court of Customs and Patent Appeals.

CONCLUSION

The conceptions of the TRIPS, WIPO, and OECD shared the same that the patent system can maximize economic growth and a social benefit. This paper found that Guellec and Potterie, David A. Burge, Beata Smarzynska Javorcik were in favor of TRIPS, WIPO, OECD while the view of Alexander I. Poltorak and Paul J. Lerner was contrary to those of these organization. However, Daniel J Gervais was neutral to affirm the impact of IP on economic growth based on the facts finding. Notwithstanding some writers viewed patent was absolutely not a tool to promote economic development, we, all the world, cannot focus on only economic development; but to take account of all-round development such as technology diffusion and human dignity. Myanmar IP writers also hold the same view as TRIPS, WIPO, and OECD.

Concerning the two famous patent systems, exceptions to patent in the EU are the conduct that inflicts ordre public or human dignity and medical methods. In the U.S., the creations by laws of nature, natural/ physical phenomenon, and abstract idea are the exceptions to patent. For example, in the case of the Neural Progenitor Cells, the Court of Justice of the EU decided that such conduct inflicted human dignity.

In reality, the U.S. has not faced such an issue. The U.S. has granted embryonic cell patent for medical uses. Reflective from this issue, as we cannot focus on the rocket development of technology, if the statute provides the clause “ordre public”, the patentability will not be so much complicated. Thus, the overall system of the EU patent is better taken as an example to be studied for the republic of the Union of Myanmar as an emerging country that is going to handle the patent issue.

BIBIOGRAPHY

i. European Community Treaty (ECT), 1956
ii. European Patent Convention (EPC), 1973
iii. Paris Convention, 1886
v. Rome Convention, 1961
vi. Berne Convention, 1971
vii. Trade Related Aspect of Intellectual Property Rights, 1994
viii. German Patents Act, 1998
ix. India Patent and Designs Act, 1911
x. Myanmar Patents and Designs Act, 1945
xii. United States Code Title 35 (35 U.S.C.)
xix. Fink, Carsten and Maskus, Keith E, (Eds.), Intellectual Property and Development: Lessons
from Recent Economic Research (the World Bank and Oxford University Press, 2005).


