

Protection of Improvement Invention Under Indonesia's Patent Law

Muhammad Hawin*

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* Professor of Law, Faculty of Law, Universitas Gadjah Mada (UGM) (Yogyakarta, Indonesia).
Email:hawin@mail.ugm.ac.id.

Abstract

This article aims to examine the protection of improvement invention under Indonesia's Patent Law 2016 compared to the TRIPs Agreement. It also aims to find out the weaknesses of its protection in the Law and finally to provide a recommendation to rectify the weaknesses.

The research uses a normative approach, which is analyzing certain provisions in Indonesian patent laws and international conventions, especially the TRIPs Agreement, and incorporating information from books, journals and Internet sources as supporting arguments. The method of analysis is a comparative one.

The article finds some weaknesses of the protection of improvement invention in Indonesia's Patent Law 2016, such as the Law does not define "improvement" and it does not recognize a new use of an existing product as a patentable invention. Unlike the TRIPs Agreement, the Law seems to confine the protection of improvement invention only to a simple patent contradicting with its general recognition that improvement invention can be protected by a basic patent. In terms of compulsory licensing, unlike the TRIPs Agreement, the Law does not govern the possibility of waiving the prior authorization effort requirement to remedy an anti-competitive practice. Additionally, the Law imposes an onerous local working requirement that is not in line with Article 27(1) of the TRIPs Agreement. The article recommends that Indonesia define the meaning of improvement. The country should recognize a new use of an existing invention in a medical context as a patentable invention. Concerning compulsory licensing, Indonesia should govern the waiver of the prior authorization effort requirement to remedy an anti-competitive practice. Besides, regarding the local working requirement, Indonesia should ease the requirement by amending the Patent Law 2016 to follow its previous patent laws' flexible local working requirement, which does not arguably contradict the TRIPs Agreement.

Keywords: patent, law, improvement, invention, protection, compulsory, licensing, requirement.

I. Background

An invention is rarely a pioneering one. Most inventions are the improvement of the existing ones, and consequently most patents granted today are improvement patents.¹ Even, the very famous Thomas Eddison rarely made pioneering inventions. Edison did not invent the light-bulb. However, Edison improved it by developing a light-bulb that used lower current electricity, a small carbonized filament, and an improved vacuum inside the globe. Edison's improvement lead to a long-lasting light. Before Edison's, light-bulbs lasted only a few hours, but after Edison's improvement, light-bulbs could last 50 to 60 days. It can be stated that by his improvement, Edison invented the first commercially useful light-bulb²

Improvement invention is something that made a device cheaper and more effective, easier or more useful or valuable, or which in any way made an article preferable in commerce. This was stated by the judge Lord Hoffmann in the case of *Buchanan v. Alba Diagnostics Ltd.*³

According to Mark Lemley, there are three kinds of technological improvement inventions. The first one is "minor" improvement to a patented invention. This type of improvement invention is not patentable. If the improvement invention infringes its basic patent, the original patentee may sue, seeking an injunction and/or damages. Because the improvement invention is not patented, the original patentee can freely practice it. The second one is a "significant" improvement invention. It can be patented independently from the original patented invention. For example, in a case where a pioneer inventor patented the original design of a manual toothbrush, and then a subsequent inventor invents an electric toothbrush, it can be a significant improvement that incorporates the earlier patented invention. The third one is "radical" improvement invention. Under the reverse doctrine of equivalents, it may completely avoid liability although it literally infringes the first patent.⁴ Its good example is Boyden's improved train brake. Although Boyden's improvement invention technically fell within Westinghouse's patented

1 Kirk Teska, *What Are Improvement Patents and New Use Patents?*, <https://smallbusiness.yahoo.com/advisor/what-are-improvement-patents-and-231516208.html> (last visited Dec. 7, 2019).

2 Gene Quinn, *The Successful Inventor: Patenting Improvements*, <https://www.ipwatchdog.com/2014/05/03/the-successful-inventor-patenting-improvements/id=49396/> (last visited Dec. 1, 2019).

3 *Buchanan v. Alba Diagnostics Ltd* [2004] UKHL 5, [2004] SC. (HL) 9 (HL).

4 Peter Lee, *The Accession Insight and Patent Infringement Remedies*, 110 Mich. L. Rev. 185-186 (2011).

train brake claims, Boyden's radically improved design of the train brake avoided an infringement.⁵ Thus, whether an improver can get an independent patent (the second patent) depends on the extent of the improvement he or she has made. At least, his or her improvement must be significant so that he or she can obtain a second patent.

Protection of the improver is one of the important issues relating to an improved invention. On the one hand, granting all patent rights of the improved invention only to the improver may remove the incentive for the first inventor to make the original invention since he or she finally finds his or her original invention may no longer very valuable or obsolete because it is competed by the improved invention. On the other hand, conferring all patent rights of the improved invention only on the first inventor removes the incentive for the subsequent inventor to make improvements because the first inventor would obtain all the rewards from both the first invention and its improvement.⁶ In essence, patent law does not give the first patent holder any right to improvements. A new and separate patent can be issued for an improvement to an invention. The first patent holder sometimes loses the chance to apply for a patent of improvement earlier than the improver. Hence, a person other than the first patent holder successfully designs around or substantially improves his or her first patent and then gets a new patent on the improvement. However, in many cases, the first patent holder takes action against the improver or the first patent holder blocks the improvement patent; such improvement cannot be exercised without the first patent holder's license since his or her technology has been incorporated into the improved patent.⁷ Therefore, it is important to discuss the protection of the rights of the improver as a second patent holder.

So far, there has been no international agreement that governs the meaning of improvement. The Paris Convention⁸ mentions the term "improvement"⁹ but does not define it. The Agreement on Trade-Related Aspects of Intellectual Pro-

5 *Boyden Power-Brake Co. v. Westinghouse*, 170 U.S. 537 (1898).

6 Charles W. Adams, *Allocating Patent Rights between Earlier and Later Inventions*, 54 St. Louis. U. L.J. 55- 56 (2009).

7 Kenneth J. Dow and Traci Dreher Quigley, *Improvements for Handling Improvement Clauses in IP Licenses: An Analytical Framework*, 20 Santa Clara High Tech. L.J. 577 (2003). Available at: <http://digitalcommons.law.scu.edu/chtlj/vol20/iss3/1> (last visited Dec. 5, 2019).

8 The Paris Convention for the Protection of Industrial Property 1883 (as amended in 1979).

9 Article 1(4) of the Paris Convention provides: "Patents shall include the various kinds of industrial patents recognized by the laws of the countries of the Union, such as patents of importation, patents of *improvement*, patents, and certificates of addition, etc." (Emphasis added).

perty Rights (hereinafter “TRIPs Agreement”) does not contain the term “improvement” but it can be interpreted that any improvement satisfying the conditions of patentability can be patented. However, in relation to compulsory license to exploit a second patent (improvement patent), Article 31(1) of the TRIPs Agreement requires that the improvement “shall involve an important technical advance of considerable economic significance in relation to the invention claimed in the first patent.” Unfortunately, the meaning of the sentence is not defined by the TRIPs Agreement. There is no other international intellectual property agreement that governs the issue. Although the Paris Convention governs compulsory license,¹⁰ it is silent on the issue of compulsory license to exploit an improvement patent. Therefore, Article 31(1) of the TRIPs Agreement is worth discussing in this writing.

Indonesia has promulgated a new Patent Law, that is Law Number 13 of 2016 on Patents (the Patent Law 2016) in which improvement invention is governed. Article 1 number 2 of the Patent Law 2016 provides: “Invention shall mean an Inventor’s idea that is poured in any activity of solving a specific problem in the field of technology, either in the form of a product or process, or *improvement* and development of a product or a process.”¹¹ This provision recognizes that improvement is an invention. Based on Article 3 paragraph (1) of the Patent Law 2016, an invention can be patented if it is novel, involves an inventive step and is industrially applicable. However, Article 3 paragraph (2) of the Patent Law 2016 provides: “A Simple Patent ... shall be granted to an Invention which is novel, *improvement* of an existing product or process, and industrially applicable.”¹²

Article 3 paragraph (2) mentioned above seems to limit the rights of the improver because the improver can only be granted a simple patent. The question is whether or not it is in line with the TRIPs Agreement. Additionally, the meaning of improvement in the Patent Law 2016 is not defined. Therefore, the position of the Patent Law 2016 is important to be examined.

Indonesia’s Patent Law 2016 also contains a provision on a local working requirement that is onerous to improvers since they probably do not have infrastructure or facilities in the territory of Indonesia to exploit their patents. This new policy is also important to analyze in relation to the protection of impro-

10 See Paris Convention, art. 5(2)-(4).

11 Emphasis added.

12 Emphasis added.

vement invention in the country.

This article will examine the protection of improvement invention in Indonesia under Indonesia's Patent Law 2016. The article will first discuss the protection of improvement invention in the TRIPs Agreement. Then, it proceeds with provisions in the Patent Law 2016 compared with those in the TRIPs Agreement. The article will argue that the Law has several weaknesses in protecting improvement invention. Finally, it will come up with a recommendation to rectify the weaknesses to enhance the protection of improvement invention in Indonesia.

II. Definition of Improvement Invention

Improvement of a basic patent always features two inventors, one coming after the other. The first inventor makes an invention and patents it, and then the second inventor improves on it. The second inventor uses the ideas revealed in the first patent as inputs in his or her inventive process, and he or she invents things that are essentially new and that have inventive steps beyond the things revealed by the first inventor. Improvements always involve technological advances over the first invention. The improvement can never be disclosed by the first patent. An improver makes new things after the filing of the first patent. He or she does not make, use, or sell things disclosed and made available to the public by the first patent upon which he or she improves.¹³

In the law of patents, *Black's Law Dictionary* defines improvement as "an addition to, or modification of, a previous invention or discovery, intended or claimed to increase its utility or value."¹⁴ It essentially states that there are two kinds of improvement, namely addition and modification. The two must satisfy the requirement of increasing utility or value of the previous invention. The definition was taken from the case *Steiner Sales Co. v. Schwartz Sales Co.*¹⁵ The United States Patent Law¹⁶ itself does not define the meaning of improvement

13 Kevin Emerson Collins, *Getting into the "Spirit" of Innovative Things: Looking to Complementary and Substitute Properties to Shape Patent Protection for Improvement*, 26 Berkeley Tech. L.J. 1217, 1243 – 1244 (2011).

14 *Improvement*, Black's Law Dictionary (6th ed. 1990).

15 *Steiner Sales Co. v. Schwartz Sales Co.*, 98 F.2d 999, 1010 (10th Cir. 1938).

16 35 U.S.C. § 101.

invention. It only states that an improvement invention can be patented as long as certain conditions and requirements are satisfied.¹⁷

Apart from some addition to and modification of a basic patent, improvement can also take the form of substitution and a new use of an existing invention.¹⁸ The Gillette Mach3 razor having three blades is an example of an addition invention to previous razors that had only two blades. Another example is the original vinyl record player. Initially, it was a one record device, someone then patented a mechanism that enabled multiple records to be loaded and played sequentially.¹⁹

An example of a substitution invention is Jeff Bezos's substituting of the "one-click" purchasing feature for the prior virtual shopping cart model.²⁰ The rubber automotive tire is another example. Its basic design remains unchanged, but hundreds of new patents have been granted for changes to the rubber compounds and the tread patterns.²¹

For a new use of an existing invention, a good example is the invention of the idea of using Bag Balm -- an ointment typically used to soothe irritated cow udders -- to treat human baldness. The U.S. Federal Circuit found it patentable.²² Another great example is the Tempur-Pedic mattress, a very successful product in today's marketplace. It uses the cushioning material originally invented and patented by NASA to protect astronauts when their vehicles re-entered Earth's atmosphere. Since the 1980s, patents have been issued for a new use of the material as a Tempur-Pedic mattress for people to sleep.²³

According to Mark Lemley, there are three kinds of technological improvements. The first one is "minor" improvement to a patented invention. This improvement is not patentable. The improvement makes changes to the original invention and the changes add some value. However, the value is less than the

17 35 U.S.C. § 101 provides: "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful *improvement* thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." (Emphasis added).

18 Kirk Teska, *supra* note 1.

19 Amar Sehmi, *The Improvement Patent: An Easier Way to Get Patent Approval*, <http://inventiapatent.com/2013/06/19/the-improvement-patent-an-easier-way-to-get-patent-approval/> (last visited Dec. 7, 2019).

20 Kirk Teska, *supra* note 1.

21 Amar Sehmi, *supra* note 19.

22 Kirk Teska, *supra* note 1.

23 Amar Sehmi, *supra* note 19.

minimum additional value required for an improvement patent because the improvement is obvious in view of the original patent. The patent law cannot protect minor improvement, even minor improvement may infringe the original patent. Furthermore, because the improvement is not qualified for patent protection, minor improvers cannot prohibit the original patent holder and/or other competitors from copying their improvement. And if the minor improvement turns out to be infringing, the original patent holder can sue the minor improver during the term of his or her patent. Thus, the original patent holder obtains the value of the improvement and can then freely practice it.²⁴

The second one is “significant” improvement. It can be patented independently from the original patented invention. For example, a pioneer inventor patented the original design of a manual toothbrush. Then, a subsequent inventor invents an electric toothbrush. This can be a significant improvement that incorporates the earlier patented invention. The improvement exceeds the minimum value threshold for patentability. However, significant improvers still risk infringement of the original patent, either literally or based on the doctrine of equivalents.²⁵

According to *Black's Law Dictionary*, the doctrine of equivalents means that “if the two devices do the same work in substantially the same way and accomplish substantially the same result, they are the same, even though they differ in name, form or shape.”²⁶ The doctrine of equivalents is to prevent fraud on a patent by making insubstantial changes to a patented invention to take it outside of the literal scope of its claims.²⁷

An example that a significant improvement infringed the original patent is in the case of *Marconi Wireless Telegraph Co. v. De Forest Radio Telephone & Telegraph Co.*²⁸ It was held that a triode (a container having three electrodes) infringed a prior patent on a diode (a container having two electrodes) because the triode unavoidably contained two electrodes in a container.²⁹

24 Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 Tex. L. Rev. 989, 1007-1008 (1997).

25 *Id.*

26 *Black's Law Dictionary* (6th ed. 1990), at 542.

27 Charles W. Adams, *supra* note 6, at 78.

28 *Marconi Wireless Telegraph Co. v. De Forest Radio Telephone & Telegraph Co.*, 236 F. 942 (S.D.N.Y. 1916), *aff'd*, 243 F. 560 (2d Cir. 1917).

29 Mark A. Lemley, *supra* note 24, at 1008 – 1009.

A significant improvement patent holder is not free from an infringing suit by the original patent holder. The original patent holder can sue for damages for past infringement, and an injunction against future use of the infringing improvement. However, the original patent holder cannot seize the value of the significant improvement because that improvement has been patented. If the original patent holder uses the patented improvement, the significant improver can sue him. This situation is called “blocking patents.” The original patent holder can prevent the improver from using his or her patented improvement, but the improver can also prevent the original patent holder from practicing the patented improvement. To resolve the problem, they can negotiate a licensing agreement that enables them to practice the improved invention.³⁰

The third one is “radical” improvement. An improvement is radical if it constitutes “a departure from all that came before it, even though the improvement may fall within the literal claims of the original patent.”³¹ Under the “reverse doctrine of equivalents,” radical improvers may completely avoid liability although they literally infringe the original patent.³² The doctrine protects from infringement an invention “so far changed in principle from a patented article that it performs the same or a similar function in a substantially different way, but nevertheless falls within the literal words of the claim.”³³ For example, Boyden’s improved train brake. Although Boyden’s improvement technically fell within Westinghouse’s patented train brake claims, Boyden’s radically improved design of the train brake avoided an infringement.³⁴

Those definitions of improvement have developed through cases, especially in Common Law countries, like in the U.S. As mentioned above, the U.S.

30 *Id.* at 1009 – 1010.

31 *Id.* at 1010.

32 *Id.*

33 *Id.* at 1011.

34 *Boyden Power-Brake Co. v. Westinghouse*, 170 U.S. 537 (1898). In this case, Westinghouse accused Boyden’s improved train brake of infringing its patent. Westinghouse’s patented brake used both a central air reservoir as well as auxiliary air reservoirs in each train car to generate force for the brake cylinders, and it used a “triple valve” to coordinate air flow and pressure in each brake. Westinghouse’s brake also has a separate “auxiliary valve” that could simultaneously direct air from both the central and auxiliary reservoirs to the brake cylinders in case of emergency. Boyden’s brake contained similar elements, including a triple valve. However, Boyden’s ingenious triple valve incorporated within it a valve that allowed air from both the central and auxiliary air reservoirs into a brake cylinder in case of emergency. Arguably, this element paralleled the separate “auxiliary valve” of Westinghouse’s brake, thus rendering Boyden’s brake a literal infringement of Westinghouse’s patent. However, noting the “manifest departure from the principle of the Westinghouse patent,” the U.S. Supreme Court denied liability under the reverse doctrine of equivalents.

Patent Law itself does not define the meaning of improvement. Similarly, Australian Patent Law³⁵ does not define the meaning of improvement either. Section 81 of Australian Patent Law only provides that improvement is a kind of addition of the main invention. According to the provision, the addition of the main invention can take the form of improvement or modification. They can be granted a patent of addition.

Malaysian Patent Law³⁶ only mentions the term “improvement” once, which is in Section 17 stating: “utility innovation means any innovation which creates a new product or process, or any new *improvement* of a known product or process, which can be made or used in any kind of industry, and includes an invention.”³⁷ The whole provisions of the Law do not define the meaning of improvement.

Indonesian Patent Law 2016 also does not define the meaning of improvement. Article 1 number 2 of the Patent Law 2016 provides: “Invention shall mean an Inventor’s idea that is poured in any activity of solving a specific problem in the field of technology, either in the form of a product or process, or *improvement* and development of a product or a process.”³⁸ However, there is no explanation regarding the meaning of improvement. So far, there has been no case that defines it. Hence, it is important to discuss this later.

III. Protection of Improvement Invention in the TRIPs Agreement

The TRIPs Agreement does not mention the word “improvement.” However, the idea of improvement is implied in Article 31(I) in relation to compulsory licensing (Other Use without Authorization of the Right Holder) that will be discussed later.

In the author’s opinion, by not mentioning the word “improvement,” the TRIPs Agreement does not discriminate between pioneering inventions and improvements. As long as they satisfy the conditions of patentability, they deserve

35 Patents Act 1990 (Cth) (Austl.). Act No. 83 of 1990 *as amended up to 2016* (by Act No. 4, 2016).

36 Patents Act 1983 (Malay.) (Act No. A291 of 1983, as last amended by Patents (Amendment) Act 1993).

37 Emphasis added.

38 Emphasis added.

patent protection. Article 27(1) of the TRIPs Agreement in the relevant part provides: "... patents shall be available for *any inventions*, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application."³⁹ The terms "any inventions" indicate that the coverage of the Agreement is very broad. The TRIPs Agreement does not take into account the difference between pioneering inventions or improvement ones; provided they are new, unobvious (inventive steps) and industrially applicable they can be patented. As Mark A. Lemley states: "In some sense, any invention, no matter how pioneering, can be thought of as an improvement on prior work. One might conceive of the automobile as an improvement on the horse and buggy, for example, or of computers as an improvement on calculators."⁴⁰ So, the position of the TRIPs Agreement not to discriminate between pioneering inventions and improvement ones seems to be logical.

It is still questionable whether Article 27(1) of the TRIPs Agreement obliges Members to grant a patent on uses of known products. In other words, whether the term "processes" in the Article shall cover uses or method of use. As mentioned above, a new use of an existing invention is a kind of improvement. Therefore, under the TRIPs Agreement, the protection of this kind of improvement is uncertain.

Countries have differed regarding the protection of uses. In the U.S., the patent on new use is confined to a particular "method of use." In Europe, a known product for a new use can be patented under Article 54(5) of the European Patent Convention. However, since 1984, under the "Swiss Formula," method of use not a product for a specific use, which can be patented. Many patent laws in developing countries do not mention the protection of uses or methods of use.⁴¹ This background probably explains why Article 27(1) of the TRIPs Agreement does not mention specifically the patentability of uses. Thus, under the TRIPs Agreement, WTO members have discretion whether or not to grant a patent on uses of known products and whether or not to grant a patent on a new use of the existing invention as a kind of improvement.

In relation to compulsory licensing, Article 31(1) of the TRIPs Agreement governs the condition of improvement patent. That Article provides:

39 Emphasis added.

40 Mark A. Lemley, *supra* note 24, at 1010.

41 UNCTAD-ICTSD, Resource Book on TRIPS and Development 356-357 (Cambridge Univ. Press, 2005).

Where the law of a Member allows for other use of the subject matter of a patent without the authorization of the right holder, including use by the government or third parties authorized by the government, the following provisions shall be respected:

- (1) where such use is authorized to permit the exploitation of a patent (“the second patent”) which cannot be exploited without infringing another patent (“the first patent”), the following additional conditions shall apply:
 - i) the invention claimed in the second patent shall involve an important technical advance of considerable economic significance in relation to the invention claimed in the first patent;
 - ii) the holder of the first patent shall be entitled to a cross-licence on reasonable terms to use the invention claimed in the second patent; and
 - iii) the use authorized in respect of the first patent shall be non-assignable except with the assignment of the second patent.

The improvement patent is also referred to as “dependent patent” because that patent cannot be used without infringing the existing patent (the first patent). It is also called the “second patent.” In order for the improver or the second patent holder to be able to use his or her second patent, he or she must obtain a license from the first patent holder. However, sometimes, the first patent holder refuses to give a license to the second patent holder. This bad situation may cause second patents to be unusable and remove the incentive for later inventors to make discoveries. The TRIPs Agreement deals with the issue by allowing WTO members to grant compulsory licensing to the second patent holder as provided in Article 31(I).

Article 31(I) sets forth 3 (three) conditions. One of the conditions is that the improved invention in the second patent must have “an important technical advance of considerable economic significance.” Unfortunately, the condition is not defined in the Agreement. This indicates that the Article gives discretion to WTO members to interpret the meaning. According to UNCTAD, the idea of “an important technical advance” in the Article is “reminiscent” of the previous German Patent law that required quantum of technical progress as a condition of patentability. In European patent law, that condition has been discarded because it is

very difficult to differentiate “important” and “unimportant technical advances.”⁴²

Although it has been stated that that condition is very difficult,⁴³ many countries have followed that language. For example, the United Kingdom can issue a compulsory license when the improvement patent represents an “important technical advance of considerable economic significance.”⁴⁴ Australia has also copied the language by stating: “the court is to make the order only if the court is further satisfied that the patented invention involves *an important technical advance of considerable economic significance* on the invention (other invention) to which the other patent relates.”⁴⁵ Section 49A of Malaysia’s Patents Act also imitates the language.⁴⁶

Another condition in Article 31(l) of the TRIPs Agreement is that the second patent holder shall give license to the first patent holder to use the improvement patent (second patent). This condition is similar to the situation of “blocking patents” in which the improver cannot use his or her patented improvement and the first patent holder cannot use the patented improvement either unless they give license to each other. The difference is that, unlike Article 31(l) of the TRIPs Agreement, the license in the “blocking patents” is not compulsory. Also, in the blocking patents, both the improver and the first patent holder have similar bargaining positions, because they can block each other if they cannot reach a licensing agreement. On the other hand, under Article 31(l) of the TRIPs Agreement,

42 *Id.* at 480.

43 See Richard T. Jackson, *A Lockean Approach to the Compulsory Patent Licensing Controversy*, 9 J. Tech. L. & Pol’y 117, at 134 (2004) (stating: “One may question why the requirement of TRIPS is so stringent in requiring ... that the value threshold for the improvement be so high. The TRIPS language is probably more in line with Locke, but arguably requires that the improvement patent generate too much value. Perhaps the TRIPS language reflects some sympathy towards the U.S. position that property rights in a patent should only be disturbed in the rarest of circumstances. The TRIPS framework, if implemented, would ameliorate some harm, but still leave many improvers without the benefit of being able to obtain a compulsory license”).

44 The UK Patents Act of 1977, §§ 48, 48A(1)(b)(i) provides: “(b)that by reason of the refusal of the proprietor of the patent concerned to grant a licence or licences on reasonable terms– (i)the exploitation in the United Kingdom of any other patented invention which involves an important technical advance of considerable economic significance in relation to the invention for which the patent concerned was granted is prevented or hindered ...”

45 Patents Act 1990 (Cth) s. 133(3B)(a) (Austl.). (Emphasis added).

46 Section 49A of Malaysia’s Patents Act 1983 provides: “49A.—(1) If the invention claimed in a patent (“later patent”) cannot be worked in Malaysia without infringing a patent granted on the basis of an application benefiting from an earlier priority date (“earlier patent”), and if the invention claimed in the later patent constitutes ... *an important technical advance* in relation to the invention claimed in the earlier patent, the Board ... may grant a compulsory licence to the extent necessary to avoid infringement of the earlier patent.” (Emphasis added).

the position of the first patent holder is “lower” than that of the second patent holder because the first patent holder cannot apply for a compulsory licensing if the second patent holder refuses to give license to the first patent holder to practice the second patent and the TRIPs Agreement is silent on the issue.

As mentioned above, the “blocking patents” situation arises because of the “significant” improvement and it does not arise if the improvement is radical. Thus, it implies that the improved invention in the second patent in Article 31(I) of the TRIPs Agreement must be “significant” improvement. Therefore, the condition that the second patent must involve “an important technical advance of considerable economic significance” should be interpreted not higher than “significant” improvement. It is reasonable, therefore, that the condition should be construed broadly and not as radical improvement and lower threshold should apply.⁴⁷ Additionally, the logic of the text of Article 31(I) is that WTO members have the discretion to interpret its meaning. It is important to note that, in relation to public health, in November 2001, WTO members adopted the Doha Declaration on the TRIPs Agreement and Public Health, in which paragraph 5(b) states: “Each Member has the right to grant compulsory licences and the freedom to determine the grounds upon which such licences are granted.” This really covers Article 31(I) of the TRIPs Agreement. That declaration actually echoes the logic inherent in the text of Article 31(I).⁴⁸

47 See Leistner M. (2015), *The Requirements for Compulsory Dependency Licences: Learning from the Transformative Use Doctrine in Copyright Law*, in Hilty R., Liu K.C. (eds) *Compulsory Licensing*, MPI Studies on Intellectual Property and Law vol. 22, Springer, Berlin, Heidelberg (arguing a functional and relative approach to the interpretation of the Art. 31 (I) TRIPS condition that “the invention claimed in the second (dependent) patent shall involve an important technical advance of considerable economic significance in relation to the invention claimed in the first patent”; that the condition should be interpreted consistently with regard to the relation to the first patent, i.e. a lower threshold should apply if the first patent involves only an incremental technical advance).

48 Jayashree Watal, *Patents: An Indian Perspective*, in Jayashree Watal and Antony Taubman (editors), *The Making of the TRIPs Agreement, Personal Insights from the Uruguay Round Negotiations*, WTO, Geneva, at 308 (2015).

IV. Protection of Improvement Invention in Indonesia's Patent Law 2016

A. Provisions in Indonesia's Patent Law 2016 Compared with the Provisions in the TRIPs Agreement

1. Several Weaknesses of the Protection of Improvement Invention in Indonesia's Patent Law 2016

Under Indonesian Patent Law 2016, an improvement may be recognized as an invention. Article 1 number 2 of the Law provides: “*Invention* shall mean an Inventor's idea that is poured in any activity of solving a specific problem in the field of technology, either in the form of a product or process, or *improvement* and development of a product or a process.”⁴⁹ Then, if an improvement satisfies the conditions of patentability mentioned in Article 3(1)⁵⁰ of the Law, namely novelty, inventive steps, and industrial application, it can be granted a patent.

However, unfortunately, the Law does not define the meaning of “improvement” and, so far, there has been no relevant case reported⁵¹ and it seems to be an unattended concept among scholars since there has been no Indonesian literature on it. Consequently, the weakness in the Patent Law 2016 seems to be ignored. Nevertheless, in practice, the Patent Office in Indonesia's Directorate General of Intellectual Property has been receiving the patent application for improvements and has granted several patents on them.⁵²

Another weakness of Indonesian Patent Law 2016 on the protection of improvement is that an improvement in the form of new use of an existing product

49 Emphasis added.

50 This Article provides: “A Patent ... shall be granted to an Invention, which is novel, involves an inventive step and is industrially applicable.”

51 Compare the situation in Malaysia. In *IEV International Pty Ltd v. Sadacharamani a/l Govindasamy* [2008] 2 *MLJ* 754, the High Court of Malaysia considered the issue of novelty in relation to improvements made to an existing patent and whether to invalidate the improvement patent. The High Court Invalidated the improvement patent in favor of the original patent owner. The Court adopted a strict approach in recognizing improvement patentee's rights because the improvement patent lacked technical improvements or the improved invention was a mere superficial change to the original patent pursuant to the Patents Act 1983. See Mirandah, *Malaysia High Court Invalidates Recent Patent in Favour of Original Patentee*, Jul. 30, 2008, <https://www.mirandah.com/pressroom/item/160-malaysia-high-court-invalidates-recent-patent-in-favour-of-original-patentee/> (last visited Dec. 10, 2019).

52 See <https://pdki-indonesia.dgip.go.id/index.php/paten?q=pengembangan&type=1> (last visited Dec. 10, 2019).

cannot be patented. Article 4(f)(1) states: “invention does not include ... *new use* of existing and/or known product.”⁵³ This is a new provision in Indonesian patent law. The previous Indonesian Patent Law 2001⁵⁴ did not mention this. Unfortunately, the meaning of “new use” in the Article is not defined. As mentioned above, improvement can take the form of new use of an existing invention. Hence, as the Article indicates, in Indonesia, new use improvement cannot be patented because it is not considered as an invention.

As mentioned above, improvement can be addition, modification, substitution and a new use for an existing invention. It is clear that the Patent Law 2016 excludes a new use improvement. On the other hand, since the Law does not define the meaning of improvement, it is not clear whether or not those all other kinds of improvement are covered by the Law.

The other weakness is the provision of Article 3 paragraph (2) of the Law that seems to confine the protection of improvement only to simple patents (*paten sederhana*). Article 3 paragraph (2) provides: “A Simple Patent ... shall be granted to an Invention which is novel, *improvement* of an existing product or process, and industrially applicable.”⁵⁵

That provision seems to limit the rights of the improver because the improver can only be granted a simple patent. However, if the above-mentioned Article 1 number 2 of the Law that provides the general definition of invention and Article 3 paragraph (1) of the Law that governs the conditions of patentability are referred, an improvement can be granted a basic patent if it satisfies all the conditions of patentability, which are novelty, inventive step and industrial application. Thus, Article 3 paragraph (2) is confusing and seems to contradict Article 3 paragraph (1). The provision of Article 3 paragraph (2) is new and different from the position of Indonesian previous Patent Law⁵⁶ of which Article 6 provides: “Any Invention in the form of a product or device, which is novel and possesses practical use values because of its shape, configuration, construction, or component may be granted legal protection in the form of a Simple Patent.” The latter provision did not mention “improvement.” This means that according to the previous law, the protection of improvement was not confined to a simple patent.

53 Emphasis added.

54 Law Number 14 of 2001 on Patents (Indon).

55 Emphasis added.

56 Law Number 14 of 2001 on Patents (Indon).

In the Author's view, to construe the two seemingly contradicting provisions, which are Article 3 paragraph (1) and Article 3 paragraph(2), the requirements of a simple patent in Article 3 paragraph (2) should be taken into account. Article 3 paragraph (2) above clearly states that to obtain a simple patent an invention *does not* need to involve an inventive step (unobvious). This means that if an improvement is not unobvious, but novel and industrially applicable, it can only be protected by a simple patent. However, if the improvement is unobvious, novel and industrially applicable, it can be granted a basic patent (standard patent). Although a basic patent holder and a simple patent holder have the same rights as governed by Article 19(1)⁵⁷ of the Law, they are different in the duration of protection. The duration of a basic patent is 20 (twenty) years commencing from the filing date, whereas the duration of a simple patent is 10 (ten) years from the filing date. The duration cannot be extended.

As indicated above, there are three kinds of technological improvement, namely: minor improvement, significant improvement, and radical improvement. So far, they are all unknown concepts in Indonesia. The above analysis indicates that Indonesian Patent Law 2016 recognizes only two kinds of improvements. Namely, an improvement that satisfies all the conditions of patentability (novel, unobvious, and industrial applicable), which can be granted a basic patent (*paten biasa*), and improvement that is new and industrially applicable but does not satisfy the condition of inventive step, which can only be protected by a simple patent (*paten sederhana*).

On the one hand, in relation to improvement protected by a basic patent, the stance of Indonesian Patent Law 2016 is in line with Article 27(1) of the TRIPs Agreement, because the Law enables an improvement satisfying all the conditions of patentability (novel, unobvious and industrial applicable) to be granted a basic patent. On the other hand, concerning improvement protected by a simple patent, the Law is different from the TRIPs Agreement since the latter does not expressly govern simple patents. Although Article 2(1)⁵⁸ of the TRIPs Agreement obliges WTO members to comply with the Paris Convention 1883 (as

57 Article 19(1) of Indonesia's Patent Law 2016 provides: "A Patent holder shall have the exclusive right to exploit his Patent and prohibit any other party who without his consent: a. in the case of product-Patent: makes, uses, sells, imports, rents out, delivers, or makes available for sale or rental or delivery of the Patented product; b. in the case of process-Patent: uses the Patented production process to make products and commits other activities as referred to in point a."

58 This Article provides: "In respect of Parts II, III and IV of this Agreement, Members shall comply with Articles 1 through 12, and Article 19, of the Paris Convention (1967)."

amended in 1979) that mentions Utility Models, which are comparable to Simple Patent,⁵⁹ the Paris Convention itself does not govern the meaning of Utility Models. However, the vacuum of the provision on Simple Patent or Utility Models in the TRIPs Agreement is not an obstacle for WTO members to provide Simple Patent to improvement invention as long as they do not violate Article 27(1) of the TRIPs Agreement.

2. Improvement Patent and Compulsory Licensing

Indonesian Patent Law 2016 governs improvement in relation to compulsory licensing. Article 82(1)(c) of the Law provides: "Compulsory License constitutes a license to exploit Patent ... on the grounds: (c) Patent of improvement of existing Patent cannot be exploited without using another's existing Patent." This means that an improver can apply for a compulsory license to exploit his or her improvement patent (second patent).

Then, according to Article 83(2) of the Law, the application is filed to the Indonesian Minister of Law *at any time after the patent is granted*. This is confusing taking into account Article 84(1)(b) of the Law that requires the improver to make efforts to obtain authorization from the first patent holder before applying for a compulsory license and the efforts have failed within twelve months. This is similar to the provision of Article 31(b)⁶⁰ of the TRIPs Agreement, which requires the improver (the second patent holder) to make efforts to obtain authorization from the first patent holder before applying for a compulsory license and the efforts have failed within a reasonable time (the prior authorization effort requirement). According to Article 31(k)⁶¹ of the TRIPs, this requirement can only be waived "in the case of a national emergency or other circumstances of extreme urgency or in cases of public non-commercial use" or to remedy an anti-competitive practice.

59 WIPO, *Utility Models*, https://www.wipo.int/patents/en/topics/utility_models.html (last visited Dec. 20, 2019).

60 This Article provides that WTO members can issue a compulsory license as long as "the following provisions shall be respected: (b) such use may only be permitted if, prior to such use, the proposed user has made efforts to obtain authorization from the right holder on reasonable commercial terms and conditions and that such efforts have not been successful within a reasonable period of time. This requirement may be waived by a Member in the case of a national emergency or other circumstances of extreme urgency or in cases of public non-commercial use."

61 Article 31(k) of the TRIPs Agreement provides: "(k) Members are not obliged to apply the conditions set forth in subparagraphs (b) and (f) where such use is permitted to remedy a practice determined after judicial or administrative process to be anti-competitive."

Unlike the TRIPs Agreement, Indonesian Patent Law 2016 does not govern the possibility of waiving the latter requirement to remedy an anti-competitive practice. Then, the question is whether or not the first patent holder's refusal to voluntarily give authorization to the improver can be considered as an anti-competitive practice. If the answer is positive, then, based on Article 31(k) of the TRIPs Agreement, the improver does not need to wait for a reasonable time before applying for a compulsory license. This indicates that the vacuum in Indonesian Patent Law 2016 may curtail the right of improvers in relation to compulsory licensing. To obtain a compulsory license, the improvement patent (the second patent) should meet the condition governed by Article 83(3) of the Law. The Article provides that the application for the compulsory license shall only be approved if the patent to be exploited contains "elements of innovation which are more advanced than the said existing Patent."⁶² Unfortunately, this condition is not explained in the Law. The condition does not follow the condition mentioned in Article 31(l)(i) of the TRIPs Agreement. In the author's view, the threshold of the improvement patent in the Law is lower than what is required by Article 31(l)(i) of the TRIPs Agreement. The term "advanced" in Article 83(3) of the Law can mean "modern and well developed," "at a higher and more difficult level,"⁶³ and "greatly developed beyond an initial stage."⁶⁴ Thus, in essence, it can be construed that the improvement patent is sufficient if it is more developed than the existing patent and does not necessarily have to satisfy the requirement of "important technical advance of considerable economic significance" as mentioned in Article 31(l)(i) of the TRIPs Agreement, which has been stated as so stringent.⁶⁵

The other condition to obtain a compulsory license is mentioned in Article 85(a) of the Law that "the patent holders shall be entitled to give each other a license to use the other party's patent under reasonable terms."⁶⁶ Carefully read,

62 The original Indonesian version of Article 83(3) provides: "(3) *Permohonan Lisensi-wajib sebagaimana dimaksud dalam Pasal 82 ayat (1) huruf c hanya dapat diberikan apabila Paten yang akan dilaksanakan mengandung unsur pembaruan yang lebih maju daripada Paten yang telah ada.*" ("The application for the Compulsory License mentioned in Article 82(1)(c) shall only be approved if the patent to be exploited contains elements of innovation which are more advanced than the said existing Patent.")

63 See *Cambridge Dictionary*, <https://dictionary.cambridge.org/dictionary/english/advanced> (last visited Dec. 20, 2019).

64 *Merriam-Webster*, <https://www.merriam-webster.com/dictionary/advanced> (last visited Dec. 20, 2019).

65 See *supra* note 43.

66 The original Indonesian version of this provision is: "*Pemegang Paten berhak saling memberikan Lisensi untuk menggunakan Paten pihak lainnya berdasarkan persyaratan yang wajar.*"

the Article is different from Article 31(1)(ii)⁶⁷ of the TRIPs Agreement, which obliges the improver (the second patent holder) to give cross-license to the first patent holder, whereas Article 85(a) does not. Article 31(1)(ii) is more realistic, since there is a possibility that the improver (second patent holder) refuses to voluntarily give license to the first patent holder to exploit the second patent.

There is another condition in Indonesian Patent Law 2016 that is not governed by the TRIPs Agreement, that is: the applicant (the improver) must be able to provide convincing evidence that she or he has the ability to personally and fully exploit the relevant patent and has facilities to readily implement of the relevant patent. The TRIPs Agreement is silent on this matter. The condition seems to be too onerous since, probably, when applying for a compulsory license, the improver has yet to be able to satisfy that condition and only after a certain time the improver can satisfy the condition. Other countries, like Australia and Malaysia, do not govern that kind of condition.⁶⁸

3. Improvement Patent and the Onerous Article 20 of the Patent Law 2016

Indonesian Patent Law 2016 contains Article 20 that is onerous for patent owners and improvement patent holders. The Article provides:

- (1) Patent holder shall be obliged to make products or to use the process in Indonesia. (2) Making the products or using the process as mentioned in paragraph (1) shall support technology transfer, absorption of investment and/or provision of employment opportunities.

In essence, Article 20 of the Law requires patent holders and/or improvement patent holders to manufacture their patented products or use their patented processes in Indonesia. As explicit in the second paragraph of the Article, the purpose of the local working requirement is to motivate foreign technology transfer, bolster investment and stimulate local employment opportunities in the country. If the local working requirement is not implemented, according to Artic-

67 The condition mentioned in Article 31(1)(ii) is: "the owner of the first patent shall be entitled to a cross-license on reasonable terms to use the invention claimed in the second patent."

68 Section 133(3B) of Australian Patent Law, which governs compulsory licensing in relation to improvement patent, is silent on that matter. Sections 49A and 50 of Malaysian Patent Law, which govern compulsory licensing in relation to the second patent, is also silent.

le 132(1)(e), the relevant patent can be revoked by a commercial court decision.⁶⁹

That provision has been stated as burdensome and controversial. It has therefore made several business groups and foreign countries, including the United States, send a protest to the Indonesian government.⁷⁰

Historically, the first Patent Law (the Patent Law 1989)⁷¹ in Indonesia also contained a local working requirement provision. Article 18 of the Patent Law 1989 provided: “Patents Holder shall exploit his or her patent in the territory of Indonesia.” However, the Patent Law 1989 was then amended by Law Number 13 of 1997 and Article 18 was amended to include a paragraph, which was paragraph (2), that allowed for an exception to the patent holder’s local working requirement on a national scale, if the exploitation of the patent was economically only reasonable if exercised on a regional scale. The explanatory memorandum to the provision stated that the new paragraph was added to accommodate the economic rationality of the exploitation of the patent. It further stated that not all patented inventions would be economically profitable if the size of the market for the product was not in proportion to the investment made. It gave a pharmaceutical industry as an example, which operated often on the level of a regional market. The amended provision was maintained in the next Patent Law 2001.⁷² Unlike the Patent Law 2016, the previous Patent Law was silent on the legal consequence in the case of non-compliance with the local working requirement.

69 Under Article 132(1)(e) of the Patent Law 2016, the revocation of such a patent could be initiated to the commercial court by a party representing national interest.

70 See Nick Redfearn, *Indonesia’s Controversial Patent Implementation Rules are Enacted*, Jul. 31, 2018, <https://www.rouse.com/magazine/news/indonesias-controversial-patent-implementation-rules-are-enacted/> (last visited Dec. 24, 2019). See also *AS Keberatan Pasal 20 UU Paten, Kemenkumham Terbitkan Peraturan Menteri* (The U.S. filed a complaint against Article 20 of the Patent Law, the Ministry of Laws issued the Ministerial Regulation), Feb. 22, 2019, <https://kabar24.bisnis.com/read/20190222/16/892304/as-keberatan-pasal-20-uu-paten-kemenkumham-terbitkan-peraturan-menteri> (last visited Dec. 24, 2019).

71 Law Number 6 of 1989 on Patents (the Patent Law 1989) (Indon).

72 Law Number 14 of 2001 on Patents (Indon). Article 17(1) and (2) of the Law was essentially the same as Article 18(1) and (2) of the Patent Law 1989. The former Article provided: “(1) ... a Patent holder shall be obliged to make products or to use the process that has been granted a Patent in Indonesia. (2) Exempted from the obligation as referred to in paragraph (1) if the making of the product or the use of the process is only suitable to be implemented on a regional scale.”

The local working requirement in the previous patent laws was flexible and there was no report of international criticism. The current local working requirement in the Patent Law 2016 is more difficult, and, therefore, international protests have been filed against the provision. They state the requirement is impractical because not every patent is capable of being worked in Indonesia. Very complex and very common products from electronics to biopharmaceuticals might not be able or economically viable to be produced in Indonesia. Additionally, small companies cannot afford to make products everywhere including in Indonesia.⁷³ In response to the protests, Indonesia has promulgated the Regulation of the Minister of Law and Human Rights Number 15 of 2018 on the Implementation of Patent by Patent Holder. Article 3 of the Regulation provides:

In the event that a Patent Holder has not been able to implement his Patent in Indonesia ... the Patent Holder may postpone the implementation of product manufacture or use of the Patent process in Indonesia for a maximum of 5 (five) years by submitting a request to the Minister with reasons.

Unfortunately, this Regulation lacks detail. For example, which patents should be subject to the Regulation, patents granted after the promulgation of the Patent Law 2016 or they include patents granted before it although the patent office has said that the provision applies only to patents granted after the promulgation of the Patent Law 2016.⁷⁴

Although the local working requirement provision of the Patent Law 2016 has been further “eased” by the Regulation, it still seems to be onerous. In relation to improvement patent, especially improvement-simple patents, which are probably owned by small businesses, the local working requirement will probably remove the incentive to improve and apply for patents in Indonesia because it can increase costs before they can exploit their patents. And if they apply for patents without submitting the request for the postponement of the local working requirement, they will face risk their improvement patents being invalidated.

The local working requirement is not consonant with Article 27(1) of the TRIPs Agreement that prohibits discrimination “whether products are imported or locally produced.” The local working requirement discriminates patented pro-

73 Nick Redfearn, *Article 20 of the New Patent Law in Indonesia*, Aug. 14, 2017, <https://www.rouse.com/magazine/news/article-20-of-the-new-patent-law-in-indonesia> (last visited Dec. 24, 2019).

74 See Nick Redfearn, *supra* note 70.

ducts produced locally against patented products imported because if the requirement is not complied with (meaning the patent holder only importing) the patent rights might be forfeited. In the present author's view, it seems not easy to use an exception under the TRIPS Agreement to argue for the requirement. As mentioned below, the conditions in the exception provision Article 30 (exception to patent rights) of the TRIPS Agreement are very difficult to be met. However, the Director of Patent of the Directorate General of Intellectual Property in Indonesia stated that the national interest or public interest could be used as a good argument for the local working requirement.⁷⁵ This will be discussed below.

B. Suggestion for the Refinement of the Protection of Improvement Invention in Indonesia

1. Indonesia's Patent Law Should Define the Meaning of Improvement

As mentioned above, several weaknesses are present in Indonesian Patent Law 2016 in terms of protection of improvement invention. First, the Law does not define the meaning of improvement. The Author is of the view that the Law should define it. This is very important to determine which improvement inventions deserve patent protection and which do not. The Law has governed the patentability conditions, namely, novel, inventive step (unobvious) and industrial application. However, the public should be educated that the meaning of novel (new) invention does not necessarily mean that it is a pioneering invention, improvement of an existing invention may also be considered as new and can be unobvious and industrially applicable.

It is not usual that Patent Laws in Common Law countries define the meaning of improvement. For example, the U.S. Patent Law, Australian Patent Law, and Malaysian Patent Law do not define the meaning of improvement. This is not problematic for them since, as mentioned above, the meaning of improvement in those countries has been defined through their cases. As a Civil Law country, however, where law relies more on laws and regulations, and where there is no the

⁷⁵ KLIKLEGAL.COM, *Direktur Paten Akui Pasal 20 UU Paten Bertentangan dengan TRIPS Agreement*, (the Director of Patent Realizes Article 20 Patent Law Violates the TRIPS Agreement), Feb. 15, 2018, <https://kliklegal.com/direktur-paten-akui-pasal-20-uu-paten-bertentangan-dengan-TRIPS-agreement/> (last visited Dec. 24, 2019).

binding force of precedents principle, Indonesia should take a different approach. The definition of improvement is important as a parameter for improvers so that they can protect their improvement invention and they do not waste time making improvement invention which is finally not patentable. That means it can also bolster the incentive to make improvement invention in the country. Additionally, it can also become a guideline for judges to decide cases involving improvement invention. Currently, Indonesian Judges' knowledge on intellectual property is still questionable,⁷⁶ let alone theirs on the issue of the "delicate" patentability of improvement invention.

The Author is of the view that Indonesia's Patent Law should define improvement as an addition to, modification, substitution, or a new use of an existing invention, intended to increase its utility or value. The Law should also recognize and differentiate "minor" improvement, "significant" one, and "radical" one. The "minor" improvement is not patentable, because, although it improves and adds some value to the original invention, it is obvious in view of the original patent. The "significant" improvement and the "radical" improvement can be patented because these improvements exceed the minimum value threshold for patentability. The "radical" improvement exceeds the "significant" one because it makes changes to the original invention radically and it is a departure from the original invention.⁷⁷

2. Indonesia's Patent Law Should Not Exclude a New Use of an Existing Product as an Invention

The provision of Article 4(f)(1) of Indonesian Patent Law 2016 that a new use of an existing and/or known product cannot be considered as an invention is another weakness of the protection of improvement invention in the Law. As mentioned above, a new use of an existing invention is a kind of improvement. Never before had Indonesian previous Patent Laws contained that kind of provision, which may curtail the incentive to invent. Other countries do not exclude

76 HUKUM ONLINE, *MA Ajak Perguruan Tinggi Bikin Anotasi Putusan HKI*, (Indonesian Supreme Court Invites Universities to Make Annotation to Judges' Decisions on IP), Nov. 17, 2008, <https://www.hukumonline.com/berita/baca/hol20504/ma-ajak-perguruan-tinggi-bikin-anotasi-putusan-hki/> (last visited Dec. 26, 2019) (Indonesian Supreme Court states that not all judges in Indonesia have enough knowledge on intellectual property. That is why there is no guaranty that their decisions are correct. The Supreme Court, therefore, invites law faculties to make an annotation to judges' decisions on intellectual property cases).

77 *See supra*, the discussion in Chapter II

new uses from patentability. For example, in the U.S., a company's use of an ointment made to treat cow udders to alleviate baldness in people was granted a patent for the new use of the ointment.⁷⁸ In the United Kingdom, for treatment and diagnostics for human or animal body, Section 4A(3) of its Patents Act 1977 provides:

In the case of an invention consisting of a substance or composition for use in any such method, the fact that the substance or composition forms part of the state of the art shall not prevent the invention from being taken to be new if the use of the substance or composition in any such method does not form part of the state of the art.

Essentially, Section 4A(3) of the UK Patents Act 1977 enables the patentability of a new use of an existing invention (substance or composition) in the medical context. Section 14(4)⁷⁹ of Malaysia's Patents Act 1983 also contains a similar provision. Like Malaysia's Patents Act, European Patent Convention 2000 (EPC 2000) also allows patent for new uses in the medical context. Article 54(4)⁸⁰ of the EPC 2000 contains a provision similar to Section 14(4) of the Malaysian Patents Act.

In the author's view, Indonesia's Patent Law should, therefore, be amended to omit Article 4(f)(1) in order not to exclude a new use of an existing and/or known product from the meaning of the invention. Or, at least, the Law should explain the provision of Article 4(f)(1) whether the exclusion is absolute or whether there is an exception to the exclusion. At least, in the medical context, Indonesia should follow the position in UK Patents Act, Malaysia's Patents Act and EPC 2000. It has been stated that a lot of the research has been carried out more on the invention of new uses of the old substance of drugs rather than on new drugs.⁸¹

78 JUSTIA, *Improvement and New Use Patents*, May 2019, <https://www.justia.com/intellectual-property/patents/types-of-patents/improvement-and-new-use-patents/> (last visited Dec. 27, 2019).

79 Section 14(4) of Malaysia's Patents Act 1983 provides that the prior arts "shall not exclude the patentability of any substance or composition, comprised in the prior art, for use in a method referred to in paragraph (d) of subsection (1) of section 13, if its use in any such method is not comprised in the prior art." Section 13(1)(d) provides: "... the following shall not be patentable: (d) methods for the treatment of the human or animal body by surgery or therapy, and diagnostic methods practised on the human or animal body."

80 This Article provides that the prior arts "shall not exclude the patentability of any substance or composition, comprised in the state of the art, for use in a method referred to in Article 53(c), provided that its use for any such method is not comprised in the state of the art." Article 53(c) excludes from patentability treatment and diagnostics for the human or animal body.

81 Lionel Bently and Brad Sherman, *Intellectual Property Law 545* (Oxford Univ. Press, 2014).

Therefore, if Indonesia follows the UK, Malaysia, and EPC, it can drive more incentive to research new uses of existing drugs in the country.

3. Article 3(2) of Indonesia's Patent Law Should be Amended So As Not to Confine the Protection of Improvement Invention to a Simple Patent

The above-mentioned Article 3 paragraph (2) of the Patent Law 2016 seems to confine the protection of improvement invention to a simple patent. The provision seems to contradict Article 3 paragraph (1) that enables an improvement invention to be granted a basic patent. Indonesian previous Patent Law 2001 is better since it did not contain that kind of provision. Article 3 paragraph (2) is better to be refined not to include the term "improvement of an existing product or process." Without the term, it is already understood that any novel and practical improvement not satisfying the inventive step condition can only be granted a simple patent, but any improvement satisfying all patentability conditions mentioned in Article 3 paragraph (1) can be protected by a basic patent. It is important to note that although some staff members in Indonesian Directorate General of Intellectual Property (DGIP) were of the view that an improvement invention should be granted only a simple patent⁸² but, in practice, several improvement inventions have been granted basic patents by the DGIP.⁸³

4. Concerning Compulsory Licensing, Indonesia Should Govern the Waiver of the Prior Authorization Effort Requirement to Remedy Anti-Competitive Practices

Concerning compulsory licensing, unlike the TRIPs Agreement, Indonesian Patent Law 2016 does not govern the possibility of waiving the requirement

82 A WhatsApp communication of the Author with Irni, a staff in Indonesian Directorate General of Intellectual Property, on Mar. 27, 2020.

83 See for example, "PENGEMBANGAN PADA ATAU YANG TERKAIT DENGAN SENYAWA-SENYAWA ORGANIK" (Improvement of Organic Compound), <https://pdki-indonesia.dgip.go.id/index.php/paten/d3IvVWhPL3ZQMIZlcnVUNmF6dWNpdz09?q=pengembangan&type=1&skip=30>; See also "PENGEMBANGAN PADA ATAU YANG TERKAIT DENGAN KOMPOSISI PARFUM TERENKAPSULASI" (Improvement of An Encapsulated Perfume Composition), <https://pdki-indonesia.dgip.go.id/index.php/paten/d1JHaXB1UT10V3ZjRFVnaURDT1MwQT09?q=pengembangan&type=1&skip=40> (last visited Mar. 27, 2020).

of prior authorization efforts to remedy an anti-competitive practice. As indicated above, the vacuum in Indonesian Patent Law may curtail the right of improvers in relation to compulsory licensing if the refusal of the first patent holder to voluntarily give license to the improvers can be considered as an anti-competitive practice. In the Author's view, Indonesia should rectify the vacuum by inserting the waiver in the implementing regulation to Compulsory Licensing provisions that is promised to be made by Article 88(5) of the Patent Law.⁸⁴

5. Indonesia's Patent Law Should Be Amended to Follow Its Previous Patent Law's Flexible Local Working Requirement.

As mentioned above, the local working requirement mentioned in Article 20 of the Patent Law 2016 despite already being eased by the implementing ministerial regulation is still burdensome to improvers. Its legal consequence of the patent invalidity for non-compliance exacerbates it. The local working requirement is not in line with Article 27(1) of the TRIPs Agreement.

The relevant part of the second sentence of Article 27(1) states: "patents shall be available and patent rights enjoyable without discrimination as to ... whether products are imported or locally produced." It clearly prohibits the discrimination between patent rights worked outside the territory of a WTO member conferring the patents and those worked within the territory of the member. The local working requirement in Article 20 of Indonesian Patent Law discriminates patents worked outside Indonesia (not worked in the country) and those worked in the country, and patents not worked in the country may result in their patent rights being finally revoked.

Article 2(1) of the TRIPs Agreement obliges WTO members to comply with the Paris Convention. Article 5A(1) of the Convention provides: "Importation by the patentee into the country where the patent has been granted of articles manufactured in any of the countries of the Union shall not entail forfeiture of the patent." Indonesia's local working requirement means that if a patent holder only imports and does not exploit its patent in the country, it will risk losing its patent rights. This runs afoul of Article 5A(1) of the Paris Convention.

84 This Article provides: "Provisions regarding compulsory licenses shall further be regulated by Ministerial Regulation."

It seems not easy to use the exception provision, which is Article 30 of the TRIPs Agreement as a defence for Indonesia's local working requirement. The Article is entitled "Exception to Rights Conferred." This exception refers to the patent rights mentioned in Articles 27(1) and 28(1) of the Agreement. Article 27(1) mentions "patent rights." Article 27(1) thus points to Article 28(1) that provides:

A patent shall confer on its holder the following exclusive rights: (a) where the subject matter of a patent is a product, to prevent third parties not having the holder's consent from the acts of: *making*, using, offering for sale, selling, or *importing* for these purposes that product; (b) where the subject matter of a patent is a process, to prevent third parties not having the holder's consent from the act of using the process, and from the acts of: using, offering for sale, selling, or *importing* for these purposes at least the product obtained directly by that process.⁸⁵

Based on Article 28(1) mentioned above, in relation to product patent, for example, making and importing are the rights of patent holders. In other words, to exploit their patents, patent holders can choose to import or to make the products in the member conferring the patents. The question is whether or not the right of importing may justifiably be curtailed by the local working requirement. Article 30 of the TRIPs can be used to answer the question. The Article provides:

Members may provide limited exceptions to the exclusive rights conferred by a patent, provided that such exceptions do not unreasonably conflict with a normal exploitation of the patent and do not unreasonably prejudice the legitimate interests of the patent holder, taking account of the legitimate interests of third parties.

Article 30 of the TRIPs Agreement allows exception but its conditions are difficult to be met.

The WTO Dispute Settlement Panel in *Canada-Pharmaceutical Patents* interpreting Article 30 of the TRIPs Agreement states that:

85 Emphasis added.

Article 30 establishes three criteria that must be met in order to qualify for an exception:

- (1) the exception must be ‘limited’; (2) the exception must not ‘unreasonably conflict with normal exploitation of the patent’; (3) the exception must not ‘unreasonably prejudice the legitimate interests of the patent holder, taking account of the legitimate interests of third parties.’ The three conditions are cumulative, each being a separate and independent requirement that must be satisfied. Failure to comply with any one of the three conditions results in the Article 30 exception being disallowed.⁸⁶

The Panel further states: “The term ‘limited exception’ must ... be read to connote a narrow exception - one which makes only a small diminution of the rights in question.”⁸⁷ It is difficult to state that Indonesia’s local working requirement that curtails the right of importing and compensates it with the obligation to exploit the patent in Indonesia constitutes a narrow exception to the rights conferred by Article 28(1). Had it met the meaning of “limited exception,” it is difficult to argue that the requirement does not “unreasonably conflict with normal exploitation of the patent,” which, according to Article 27(1), includes importation. Additionally, since the non-compliance with the requirement results in the risk of patent invalidity, the requirement unreasonably prejudices “the legitimate interests of the patent holder.”

However, as mentioned above, the Director of Patent of the DGIP in Indonesia stated that national interest or public interest could be a good argument for the local working requirement.⁸⁸ Probably, the Director points to Articles 7⁸⁹ and 8(1)⁹⁰ of the TRIPs Agreement. The Director’s statement seems to be positive.

86 Panel Report, *Canada–Patent Protection of Pharmaceutical Products*, at 152, para. 7.20, WTO Doc. WT/DS114/R (adopted Mar. 17, 2000)..

87 *Id.* at 155, para. 730.

88 KLIKLEGAL.COM, *supra* note 75.

89 This Article provides: “The protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations.”

90 This Article provides: “Members may, in formulating or amending their laws and regulations, adopt measures necessary to protect public health and nutrition, and to promote the public interest in sectors of vital importance to their socio-economic and technological development, provided that such measures are consistent with the provisions of this Agreement.”

Concerning this, the WTO Panel in *Australia – Tobacco Plain Packaging (Cuba)*:

Articles 7 and 8, together with the preamble of the TRIPs Agreement, set out general goals and principles underlying the TRIPs Agreement, which are to be borne in mind when specific provisions of the Agreement are being interpreted in their context and in light of the object and purpose of the Agreement.⁹¹

So, based on the above-mentioned statement of the WTO Panel, when interpreting Articles 27(1), 28 and 30 of the TRIPs Agreement in light of Indonesia's local working requirement, the provision of Articles 7 and 8 of the TRIPs Agreement should be taken into account. As mentioned above, the purpose of the local working requirement in Indonesia is to motivate foreign technology transfer, bolster investment and stimulate local employment opportunities in the country. The policy might be in line with Articles 7 and 8(1). Article 7 mentions that one of the objectives of the protection of the intellectual property is the contribution to "the transfer and dissemination of technology." This is in line with one of the purposes of the local working requirement in Indonesia. To attain the objectives, Article 7 mentions "in a manner conducive to social and economic welfare." The purpose to bolster investment and stimulate local employment might fall under the manner. Article 8(1) mentions "to promote the public interest in sectors of vital importance to their socio-economic and technological development." This might cover all the objectives of Indonesia's local working requirement.⁹²

Unfortunately, so far, there has been no authority in the WTO level which interprets Articles 27(1), 28(1) and 30 of the TRIPs Agreement in light of a local working requirement. There was a dispute between the United States (U.S.) and Brazil regarding the issue.⁹³ However, the dispute had been settled between the parties not giving the WTO panel the chance to shed light on the controversial

91 Panel Report, *Australia – Tobacco Plain Packaging (Cuba)*, para. 7.2411, WTO Doc. WT/DS458/Corr.1 (adopted Aug. 30, 2018).

92 Cf. M Halewood, *Regulating Patent Holders: Local Working Requirements and Compulsory Licences at International Law*, 35 *Osgoode Hall L. J.* no. 2, 250 – 260 (1997) (arguing that a local working requirement is not in contravention of the TRIPs). Available at <https://pdfs.semanticscholar.org/dcc3/0f14af38d60722fd4165a1053edfc263c8ef.pdf> (last visited Dec. 27, 2019).

93 Notification of Mutually Agreed Solution, *Brazil—Measures Affecting Patent Protection*, WTO Doc. WT/DS199/4 (adopted Jul. 19, 2001). See Marsoof A., *Local Working of Patents: The Perspective of Developing Countries*, In Bharadwaj A., Devaiah V., Gupta I. (eds) *MULTI-DIMENSIONAL APPROACHES TOWARDS NEW TECHNOLOGY*, Springer, Singapore, 2018 at 319 – 320 (discussing the Brazil—Measures Affecting Patent Protection case). Available at https://link.springer.com/chapter/10.1007/978-981-13-1232-8_15 (last visited Dec. 27, 2019).

local working requirement. So, the legality of Indonesia's current local working requirement under the TRIPs Agreement remains to be seen. In the present author's view, the local working requirement under Indonesia's previous patent laws is better since it was flexible by allowing for an exception to the patent holder's local working requirement on a national scale if the exploitation of the patent was economically only reasonable if exercised on a regional scale. Indonesia's Patent Law 2016 should, therefore, be amended to follow the previous patent laws' flexible local working requirement. This is essential not to impose an onerous obligation on patent holders, especially, improvement patent holders who may not have infrastructure and facilities to exploit their patents in the country and not to remove the incentive to improve and to apply for patents in the country.

V. Conclusion

The TRIPs Agreement does not mention the word "improvement" although the idea of improvement is implied in Article 31(1) in relation to compulsory licensing. By not mentioning the word "improvement," the TRIPs Agreement does not discriminate between pioneering inventions and improvement inventions. What remains uncertain in the TRIPs Agreement is whether it protects new uses of known products. In relation to compulsory licensing, the TRIPs Agreement sets out a stringent condition for improvement patent (second patent) although it gives leeway to WTO members to construe its meaning. The TRIPs Agreement enables the waiver of the prior authorization effort requirement to remedy an anti-competitive practice.

Some weaknesses of the protection of improvement invention in Indonesia's Patent Law 2016 are discovered. For example, the Law does not define the meaning of "improvement." Then, the Law does not recognize a new use of an existing product as an invention so that an improvement invention in the form of a new use cannot be patented. Unlike the TRIPs Agreement, the Law seems to confine the protection of improvement invention only to a simple patent contradicting its general recognition that improvement invention can be granted a basic patent. Concerning improvement invention protected by a simple patent, the Law is different from the TRIPs Agreement that is silent on the issue. In terms of compulsory licensing, unlike the TRIPs Agreement, the Law does not govern the possibility of waiving the prior authorization effort requirement to remedy an anti-competitive practice.

Indonesian Patent Law 2016 imposes an onerous local working requirement on patent holders and improvement patent holders. Arguably, this requirement is not in line with Article 27(1) of the TRIPs Agreement. It seems not easy for the country to use the exception provision of Article 30 of the TRIPS as well as the national interest or the public interest reason to argue for the requirement.

The Author suggests several things to refine the weaknesses of the protection of improvement invention in Indonesia. For example, Indonesian patent law should define the meaning of improvement. The definition is important as a parameter for improvers to protect their improvements and to avoid wasting the time of making improvements which are finally not patentable as well as a guideline for judges to decide cases involving improvements. Regarding a new use of an existing invention, the country should follow other countries, like the U.S., the UK, and Malaysia that recognize a new use of the existing invention in a medical context as a patentable invention. Concerning compulsory licensing, Indonesia should rectify the vacuum of the waiver of the prior authorization effort requirement to remedy an anti-competitive practice. In regards to the local working requirement, Indonesia should realize that it is not easy to argue for the policy based on the TRIPs Agreement. Indonesia should, therefore, ease the requirement by amending the Patent Law 2016 to follow the country's previous patent laws' flexible local working requirement, which was not against the TRIPs Agreement. The amendment of the Law is essential to bolster the incentive to make improvement inventions in the country.

Bibliography

Legislature

Australia's Patents Act 1990, Act No. 83 of 1990 as amended up to 2016 (by Act No. 4, 2016).

Indonesia's Law Number 6 of 1989 on Patents.

Indonesia's Law Number 14 of 2001 on Patents.

Malaysia's Patents Act 1983 (Act No. A291 of 1983, as last amended by Patents (Amendment) Act 1993).

UK Patents Act of 1977.

United States Patent Law, 35 U.S.C.

International Treaties

Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).

The Paris Convention for the Protection of Industrial Property 1883 (as amended in 1979).

Cases

Australia – Tobacco Plain Packaging (Cuba), WT/DS458/Corr.1 (2018).

Boyden Power-Brake Co. v. Westinghouse, 170 U.S. 537 (1898).

Brazil—Measures Affecting Patent Protection, WT/DS199/4 (2001).

Buchanan v. Alba Diagnostics, Ltd. [2004] UKHL 5; [2004] SC. (HL) 9 (HL).

Canada—Patent Protection of Pharmaceutical Products, WT/DS114/R (2000).

IEV International Pty Ltd v Sadacharamani a/l Govindasamy [2008] 2 MLJ 754.

Marconi Wireless Telegraph Co. v. De Forest Radio Telephone & Telegraph Co., 236 F. 942 (S.D.N.Y. 1916), *aff'd*, 243 F. 560 (2d Cir. 1917).

Steiner Sales Co. V. Schwartz Sales Co., 98 F.2d 999 (10th Cir. 1938).

Books

Henry Campbell Black, *Black's Law Dictionary*, West Publishing Co., USA, 1990.

Lionel Bently and Brad Sherman, *Intellectual Property Law*, Oxford University Press, United Kingdom, 2014.

UNCTAD-ICTSD, *Resource Book on TRIPS and Development*, Cambridge University Press, 2005.

Journal Articles and Other Publications

Charles W. Adams, *Allocating Patent Rights Between Earlier and Later Inventions*, 54 St. Louis U. L.J. 55 (2009).

Jayashree Watal, *Patents: An Indian Perspective*, in Jayashree Watal and Antony Taubman (eds.), *The Making of the TRIPS Agreement, Personal Insights from the Uruguay Round Negotiations*, WTO, Geneva (2015).

Kevin Emerson Collins, *Getting into the "Spirit" of Innovative Things: Looking to Complementary and Substitute Properties to Shape Patent Protection for Improvement*, 26 Berkeley Tech. L.J. 1217 (2011).

Leistner M., *The Requirements for Compulsory Dependency Licences: Learning from the Transformative Use Doctrine in Copyright Law*, in Hilty R., Liu KC. (eds) *Compulsory Licensing*, MPI Studies on Intellectual Property and Competition Law, vol. 22, Springer, Berlin, Heidelberg (2015).

Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 Tex.L. Rev. 989 (1997).

Marsoof A., *Local Working of Patents: The Perspective of Developing Countries*, In Bharadwaj A., Devaiah V., Gupta I. (eds.) *Multi-dimensional Approaches towards New Technology*, Springer, Singapore, 2018.

M Halewood, *Regulating Patent Holders: Local Working Requirements and Compulsory Licences at International Law*, 35 Osgoode Hall L. J.no. 2, 1997.

Peter Lee, *The Accession Insight and Patent Infringement Remedies*, 110 Mich. L. Rev. 175 (2011).

Richard T. Jackson, *A Lockean Approach to the Compulsory Patent Licensing Controversy*, 9 J. Tech. L. & Pol'y 117 (2004).

Internet Sources

Amar Sehmi, *The Improvement Patent: An Easier Way to Get Patent Approval*, <http://inventiapatent.com/2013/06/19/the-improvement-patent-an-easier-way-to-get-patent-approval/>.

CAMBRIDGE DICTIONARY, <https://dictionary.cambridge.org/dictionary/english/advanced.Gene>

Quinn, *The Successful Inventor: Patenting Improvements*, <https://www.ipwatchdog.com/2014/05/03/the-successful-inventor-patenting-improvements/id=49396/>.

HUKUM ONLINE, *MA Ajak Perguruan Tinggi Bikin Anotasi Putusan HKI*, (Indonesian Supreme Court Invites Universities to Make Annotation to Judges' Decisions on IP), Nov. 17, 2008, <https://www.hukumonline.com/berita/baca/hol20504/ma-ajak-perguruan-tinggi-bikin-anotasi-putusan-hki/>.

JUSTIA, *Improvement and New Use Patents*, May 2019, <https://www.justia.com/intellectual-property/patents/types-of-patents/improvement-and-new-use-patents/>. KABAR24, *AS Keberatan Pasal 20 UU Paten, Kemenkumham Terbitkan Peraturan Menteri*, (The U.S. filed complaint against Article 20 of the Patent Law, the Ministry of Laws issued the Ministerial Regulation), Feb. 22, 2019, <https://kabar24.bisnis.com/read/20190222/16/892304/as-keberatan-pasal-20-uu-paten-kemenkumham-terbitkan-peraturan-menteri>.

Kenneth J. Dow and Traci Dreher Quigley, *Improvements for Handling Improvement Clauses in IP Licenses: An Analytical Framework*, 20 Santa Clara High Tech. L.J. 577 (2003). Available at: <http://digitalcommons.law.scu.edu/chtlj/vol20/iss3/1>.

KLIKLEGAL.COM, *Direktur Paten Akui Pasal 20 UU Paten Bertentangan dengan TRIPs Agreement*, (the Director of Patent Realizes Article 20 Patent Law Violates the TRIPs Agreement), Feb. 15, 2018, <https://kliklegal.com/direktur-paten-akui-pasal-20-uu-paten-bertentangan-dengan-TRIPS-agreement/>.

Kirk Teska, *What Are Improvement Patents and New Use Patents?* <https://smallbusiness.yahoo.com/advisor/what-are-improvement-patents-and-231516208.html/>.

MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/advanced>.

Mirandah, *Malaysia High Court Invalidates Recent Patent In Favour Of Original Patentee*, Jul. 30, 2008, <https://www.mirandah.com/pressroom/item/160-malaysia-high-court-invalidates-recent-patent-in-favour-of-original-patentee/>.

Nick Redfearn, *Article 20 of the New Patent Law in Indonesia*, Aug. 14, 2017, <https://www.rouse.com/magazine/news/article-20-of-the-new-patent-law-in-indonesia>.

Nick Redfearn, *Indonesia's Controversial Patent Implementation Rules Are Enacted*, Jul. 31, 2018, <https://www.rouse.com/magazine/news/indonesias-controversial-patent-implementation-rules-are-enacted/>.

WIPO, *Utility models*, https://www.wipo.int/patents/en/topics/utility_models.html.