PATENT AS LEGAL CONSTRUCTION: SUPPORTING THE CYCLE INTELLECTUAL CREATION AND THE INDIGENOUS TECHNOLOGICAL CAPABILITIES

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Abstract
Patent as legal construction gives legal protection for novelty invention, supporting cycle of intellectual creation establishment and technological capabilities development. The patent culture building should be conducted continuously to create higher patent awareness and patent culture, and it can be indicated by the improving patent subscription, awareness to obtain patent and using it, and high interest to produce new technology by doing innovation and improvement to realize indigenous technological capabilities.

Intisari
Patent sebagai konstruksi hukum yang melindungi invensi baru, mendukung tercapainya alur lingkup kreasi intelektual dan pembangunan penguasaan teknologi. Pembangunan budaya 'mematenkan' seharusnya dilakukan secara terus menerus untuk menciptakan kesadaran hukum 'mematenkan’ yang tinggi dan mendapatkan teknologi baru, dengan inovasi dan perbaikan guna mewujudkan kemampuan penguasaan teknologi putra bangsa ini.

Kata Kunci: Patent, legal construction, intellectual creation, indigenous technological capabilities

A. Introduction
The progressing trial of technological development as technological interest and the progressing of economic development in global as economic interest bring all states in the world to make agreement about patent as industrial property from Paris convention to the TRIPs (GATT/WTO). The act of capital investment in Indonesia was existed since 1967, but patent was not importance issue of Indonesia’s policy, there was only technological transfer issue together foreign capitalist. From the beginning of the 1980’s the government began to overhaul Indonesia’s intellectual property right system to keep with developments in Indonesia’s economic and industries. Before The independence of Indonesia, the Octrooi had
operated in Indonesia but the act contradicted Indonesia’s sovereignty, it required that substantive patents examinations be conducted in Netherlands. As a result, the law did not survive in Indonesia.

The Indonesia government desire to bring Indonesian Intellectual Property law into line with the TRIPs agreement were the impetus for the amendments to Indonesia’s patent Law. Then, the law stipulates that the patent protection extends only to inventions related to technology, but that an aesthetic appearance, mental process, game, business strategy, computer program method or presentation cannot be patented. An interesting feature of law no.14 of 2001 is that it categorizes criminal patent infringements as delik aduan, certainly, police will investigate only after the patent holder complains of the alleged infringement.

There are two basic justifications for the patent system. The occasional controversies that erupt between “pro” and “anti” patent forces tend to involve fundamental disagreements about the legitimacy of the theories underlying these justifications. There are: (1) the “bargain” or contract theory and (2) the “natural rights” theory.\(^1\)

The bargain theory premises that people will be encouraged to produce new inventions if there is some reward as an incentive. Actually, this theory is at least partially supported by the text of the Constitutions itself, which enumerates the elements of the potential bargains: encouraging the useful arts by awarding an exclusive right to exploit the invention for a definite length of time. It also seems to be supported by common sense and the theory underlying the free-enterprise system.

The nature rights theory has a different emphasis. Under this theory, the product of mental labor is by right the property of the person who created it. Having all title to the invention, the inventor has no obligation to disclose anything and has every right to be compensated therefor. In order to obtain such disclosure—and thus allow for other, later, inventors to build upon the earlier creation—the government assures an exclusive right to profit from the ‘right’ of inventors and states that the advancement of the useful arts is its goal, which can be best achieved through disclosure. Both of theories have great useful. The ideas of bargain and disclosure provide an explanation of the purpose of patent law that seems supported by both commonsense and reason. Certainly, Critics argue that it servers only to increase the monopoly power of large corporations which receive the bulk of modern patents and that the government is failing to bargain sharply enough on behalf of its citizens.

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Supported by disclosure clause, many principles of patent as legal construction may reach legal certainty and justice.

B. Analyze and Discussion

I. Patent as legal construction

The problem of patent is not only to catch high patent culture, or techno state, but also as legal construction must give legal certainty. According to article 1(1) of Indonesia’s Patent Act number 14 of 2001, a patent is an exclusive right granted by the state to an inventor to do his or her invention or someone who obtains a right over the invention from the inventor for a special time period (20 years). Thus, patent is: (1) an exclusive right as a reward to inventor to disclose the invention, and (2) protection granted in certain time and certain territorial. The patentability subject matter according to TRIPs agreement art. 27 inter alia: products or processes: (1) new, (2) involve an inventive step, and (3) capable of industrial application.

A patent application is to be accompanied by a specification. A patent specification discloses in full the secret behind the invention so that it can be understood and made public and also sets the parameters of monopoly. The patent specification should contain: (1) title of invention, (2) description, (3) drawing, (4) abstract, (5) a complete disclosure, and (6) claims. The Claims is required to state with clarify and precision the elements of the invention for which protection is sought. Thus, the claim is a description or explanation of the essence of the invention. The scope or the extent of patent protection based on claim. The essence of protection depended on claim.

A state in the world has certain patent law that’s different from other state. There are many possibilities of a discrepancy between the words of the claim and the extent of protection. The protection may exceed the wording of a claim is generally accepted in view of the difficulty of drafting claims in such a way that their wording, understood as definition of the scope; gives fair protection to the patentee. Whereas, there are large different in the extent to which the courts in different countries and at different points in time are prepared to deviate from the wording of the claim when deciding on the scope of protection. These are in essence caused by divergences of opinion on the relative importance of the interests of the patentees and third parties, the first calling for board protection and the other for narrow protection. It is importance to make fairness, balance of each interest and legal certainty.

The importance multilateral Conventions dealing with patents are: (1) TRIPs; (2) Paris Convention; (3) Patents Cooperation Treaty; and (4) Budapest Treaty.
TRIPs is agreement that resulted by GATT/WTO, dates back to Paris Convention Principles. The Agreement On Trade Related Aspects Of Intellectual Property Right (TRIPS) has objectives to reduce impediments to trade; to encourage technological innovation; to create a better climate for technology transfer and dissemination; to provide a better balance of rights and obligations between procedures and users; also provide effective enforcement measures without becoming barriers to legitimate trade.

The dream of harmonization of patent laws finally led to the establishment of Paris Convention for the Protection of Industrial Property. That is the first major step that TRIPs based on. Within Paris Convention are found the basic norms of international patent law that’s made minimal standard in TRIPs, namely: national treatment, right of priority, most favored nation, principle of independence and moral right. The PCT system is a patent “filing” system, not patent “granting” system and provides for an international phase which comprises filing of the international application, international search, international publication and international preliminary examination, and a national phase during which the decision on granting patents is taken exclusively by national or regional offices. The benefits of the PCT may be as follows: (1) one application, in one language, filed with one office, replaces multiple foreign filings until entry into the national phase; (2) permits last minute foreign filing (before expiration of priority year); (3) an international filing date has the effect of national filing date in all designated offices; (4) uniform formal requirements accepted by all designated offices; etc.

On the other hand, The Budapest treaty was made to help solve a problem specific to patent applications for “microbiological inventions”. Problem with microbiological inventions relates to the disclosure of the invention. In the patent procedure of a increasing number of countries, it is not sufficient to file with the national patent office a written description, as complete as possible, of the microbiological invention in the patent application, but a sample of the microorganism itself must be deposited with a specialized institution. Benefits of Budapest Treaty are urgently advantageous to the depositor applying for a patent in many countries. The deposit of a microorganism under the procedures provided for in the Budapest treaty will save money and strengthen security for the depositor. Recently, nanotechnology product may be covered by patent law, but no action yet to specific protection.
Anand\textsuperscript{2} says that Patent system must serve two functions: the disclosure function and the incentive function. Follow to Anand, the patent system will develop the activities of research and development, more ever, perhaps that patent system will progress economic development especially capital investment also catch up the advance technology and capital.

If we study Patents system of Indonesia in depth, we can find the advantages and the disadvantages of its existence. The advantages or benefit perhaps make Indonesia enjoying more foreign investment, increased levels of economic growth and increased development of technology. However, there is the disadvantages that must be overcome, namely: a limited monopoly arising out of patent system results in higher price, may be company which own patents not exploit their invention fully, patent system may impede the flow of knowledge, out of date technology from foreign but in Indonesia still lack in skill human resources, always depend on foreign technology, etc.

II. Determining The Essence and The Scope of Patent Protection

As we know, right to a patent in each country may different or similar. For example, Japanese Patent System (Section 39(1)) provides that where two or more patent applications relating to the same invention are filed on different dates, only the first application may obtain a patent for invention. It is summarized that right to a patent in Japan belong to the one “the first to file” based on filing date. Germany, Netherlands, European Patent Convention and WIPO are the same as Japan, also that Indonesia one. The excellent, United States of America, is used “first to invent” (Section 102 (g) of Title 35 US Code). The terms of invention patentable are similar: novel, nonobvious, and applicable, but to establish the ‘lack’ or the ‘full’ of patentable terms is too difficult. Conflict of patent, may be infringement case, will be succeeded depending on court or alternative dispute settlement and resolution. It needs the special skill and viewpoint of judge. Commonly, America is well known with the power of discretion, but in others is relatively.

In Indonesia, the commercial court is new institution, it perhaps to make solving legal problem (in context patent litigation). The judge is mainly having the importance role to make fairness and legal certainty. On the other words, judge has discretion power to establish decision –narrow or board interpretation, seeing the truth of good faith or missed it. How far or how great the discretion, it must be analyzed. Indeed, it is urgent to know about the

\textsuperscript{2} Pravin Anand, 1984, \textit{Licensing of Technology and Intellectual Property Rights to Developing Countries}, Law Times Press, Singar Hagar, Luck Now, India hlm. 56.
essence and the extent of patent protection, but sometimes not looked. Later, it is actually importance to establish the infringement of patent right.

In Japanese Patent Law art.101 shows the principle of indirect infringement that the extent of patent protection is considered larger than the expressed in the claim. For example in patent process; art.101 stipulates that a patent for invention of a process is infringed by acts of manufacturing, assigning, leasing, displaying for the purpose of assignment or lease, or importing, in the course of trade, articles to be used exclusively for the working of such invention. However the good faith tradition exists in Japan, the decision of patent scope and patent infringement case are subject to the discretion of the court.

The extent or the scope of protection that reflected ‘essence’ (by claim) is decided on the basis of the statement of claim, whereas not only from the wording of claim but also the interpretation of it. The method to establish the essence and the scope of patent protection is depended on law in each country.

Pieroën\textsuperscript{3} states that problem “the essence of the patented invention” is a vague concept which has never been elaborated in a fundamental way by a courts. Furthermore, it is mentioned that although in many decisions the lower courts attempt a ‘full’ determination of the essence of patented invention there are also very many decision in which the search for the essence is not pursued further than required to answer the infringement question or in which an investigation towards this essence is omitted altogether. Thus, in other words, the courts must use many methods of interpretation: functional, proportional, historical, purposive, equivalent etc. This is urgently for legal certainty, for inventor’s interest and public interest.

Teruo Doi\textsuperscript{4} states that scope of application of the doctrine of equivalents was clarified for the first time by the Osaka District Court in Badische Anilin und Soda Fabrik A.G.v. Sekisui Kagaku Kogyo K.K and Sekisui Sponge. In this case, the court held as follows:

“An ‘equivalent matter’ and ‘equivalent process’ are concepts which help us recognize identity with the patented invention on condition that the same material or process is employed, along with the technical elements of the patented invention. It must be


determined if technical ideas of the prior patented invention, even if replaced by the latter, might produce the identical effect or operation or if it has interchangeability so that the technician of average ability, at the time of patent application, might readily infer this. Therefore, if the natural law on which the technical idea is based is different and belongs from the outset to a separate category as an invention, there are no grounds for application of concept of equivalency in the matter or process”.

The opposite doctrine of file wrapper estoppel is also recognized by the courts in appropriate circumstances. In the case Muranaka v. K.K. Daiwa Gomu Seisakusho, the plaintiff patentee narrowed the scope of claim to a process of using a certain method of water-proof coating in the course of opposition and invalidation proceedings before the Patents Office. The Tokyo District Court held that the inventor who declared that his invention was limited to a process of using a certain type of coating method was not permitted to contend later that the other process which did not use this method had the same functional effect, and, therefore, he was barred from claiming that the defendant’s process of using other method was equivalent to the plaintiff’s patented invention.

The Japanese legal system is based on the civil law tradition, while the principle of good faith of the Civil Code is employed in a situation where the doctrine of estoppel is applicable. Thus, both of good faith and interpretation must be used to determine the essence of patent protection. Because of the essence of patent is depended on claim, so that the claim is determining the scope or the extent of protection.

The problem of interpretation is powered by board or narrow interpretation, by the great of discretion, by the skill and view of judge in field patent. Sometimes, the judge does not know what the technology especially as detail, he may know the outside by reading the description of application. The person that skilled in the art is very importance to help interpretation, finally to make decision making. The problem of good faith is the truth of owner good faith. If the claim is ambiguous, file wrapper must be used together the good faith. If using purposive construction, certainly make board interpretation by courts—great discretion of judge, as balancing, need thinking of third party interest or public interest. If just depend on the wording of claims, it makes narrow interpretation.

However the implementation of the equivalency theory has been well established by court, the scope of equivalent is not broadly interpreted⁵. Thus, it needs understanding in

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depth in using equivalency theory. When an invention is considered to be equivalent to the patented invention, that invention is deemed to be the same as the patented invention namely ‘the function and the effect substantially’. It has been held by courts to determine and establish equivalent or not equivalent. Further the court decides that invention patentable or not. All of consideration is based on claim (just wording or substance/meaning), by interpretation and good faith, the latest is depending on court discretion.

The bigger/greater or narrower of interpretation is very importance to the patentee or third party. How greater or narrower interpretation is conferred, it influences the scope or the extent of protection, of course the monopoly right. On the other side, may be the monopoly of patent deems to overstep the bounds of lawful monopoly that’s granted patent. Stelzer\textsuperscript{6} states, ”The patent laws may be viewed as exceptions to antitrust policy of preserving competition. As in Hartford-Empire case, patent cross licensing is used, not to promote competition by making technological information more widely available in the industry, but to monopolize an entire industry. As in International Salt case, a patentee uses the patent monopoly as a lever to gain dominance in another and totally market”. The opinion of Stelzer shows that patent licensing may overstep the boundary of extent protection, because the patentee wants to make global market as own. The Sherman Act and The Clayton Act are actually related to patent accomplishment.

III. Patent awareness and indigenous technological capabilities

Building a strong Indonesia Patent Framework should rely on strength and mastery of indigenous technological capabilities. The importance of indigenous technological capabilities become significant as foreign technologies have exploited and patented Indonesian technology with certain modifications to fulfill patentability. Transfers of technology just be a dream without realization if Indonesia is always made as operators or even foreign technologies consumers. Numerous foreign patents subscribed in Indonesia are potentially overcoming similar discoveries in Indonesia as results of indigenous technological capabilities, i.e. the priority rights and foreign applicants’ intentions to regulate Indonesia market with their patents.

Government and judge should prioritize traditional society’s interest as indigenous people, who have the rights to inherit and use traditional knowledge, and prioritize

developments of *indigenous technological capabilities*. The society should improve the innovative spirits to open their self for advanced technology to ease its mastery and development. Incentives from government in forms of stimulations to discover new inventions and facilitation of patent obtaining are very important to support efforts of cultivating *patent culture* and developing Indonesian technology-economy.

In fact, based on *disclosure clause* in the principle of patent law, the patent law enables the technology development through transfer of technology. If regarding the patent law the trans-national companies are willingly to build *research and development* (R&D) institution in Indonesia, inventions produced by the R&D would be able to drive innovations on the inventions, then this is expected to create new inventions by Indonesian citizen that subsequently would be developed in industrial world. An invention emerges because the interest to develop technology and improve economy (industry), and the invention also produces benefit in technology and economy, even stimulate the next innovation to be better.

Patent culture development should be conducted continuously; not only limited in socialization of intellectual property rights, and the follow up should be accompanied with attentions of related parties in forms of facilities and incentives. For example, the requirements for patent inventor for home industries are complicated and expensive. The home industries complain about the patentable requirements and they feel expensive to pay the maintenance fee. Small producers in health sector also complain and think that bureaucracy in this sector is very difficult. For example, to obtain brand and patent from Directorate General of IPR (Ditjen HKI) and health proper distribution by the Agency for Drug and Food Control /BPOM may need long time and expensive cost. They expect to shorten bureaucracy.

The patent culture development should not stop at the step where the inventor obtains the intellectual property right, but should continue until the invention becomes royalty. Trainings are extended for the society to make betterment and to perfect patented technologies. Trainings should focus on making patent specification claim, so that the society would be able to make such invention claim without intellectual property right consultant. The roles of related departments in technology such as Technology institution (BPPT), Industrial institution (Disperin/dag), Directorate General of IPR (Ditjen HKI) and IPR consultant or IPR clinic should be improved. If facilities and incentives are granted for free and trainings to fulfill invention patentable are continuously conducted, SME’s (IKM) may improve the patent subscriptions and propose the application.
Concerns of parties like government, intellectual property right consultant, universities and the society itself as inventors are needed. As a vehicle to produce many inventors, universities are expected to be able to drive students and lecturers to move forward producing patentable invention. However, it must be taken into account the way of obtaining patent and its exploitation, cost, and marketing, and whose responsibilities these would be, considering that Indonesia does not have TLO.

**IV. Cycle of Intellectual Creation**

By the development of industries in global market, it is becoming especially important for countries to progress new technologies and obtain patents to contribute the indigenous technological capabilities. Indeed, legal awareness and patent system can support the creation of new invention to make the basic of intellectual creation. The cycle of intellectual creation was supported by Pro Patent Era. Pro Patent is effort to stimulate and strengthen the ability to compete internationally by protecting inventor’s rights and enhancing incentives to invent through the provision of stronger IPR protection.

As we know, Japanese enterprises obtain patent rights for advanced technologies, also Technology Licensing Organization (TLO) as independent organization gives the best role to build the frame of cycle of intellectual creation. Government strategic, human (skill), enterprises, inventor (from campus or people) and TLO, all of them, uphold the Japanese patent system to catch ‘techno-state’. It may adopted by Indonesia to carry out the weakness of Indonesian technological capabilities, namely developing human resources, R&D department and forming independent organization like TLO in Japan.

The industrial property right system is the driving force of cycle of intellectual creation which: (1) grants patent rights for R&D results; (2) recovers R&D costs by utilizing industrial property rights; and (3) reinvests funds into new R&D. The cycle of intellectual creation consist of creation, IPR procurement and Exploitation. The JPO support creation of new industries by accelerating the cycle, which leads to further development of economy.

Recently, the best urgent is implementing: (1) the role of government to uphold the indigenous interest in order to catch indigenous technological capabilities and (2) patent culture and patent awareness must be built sustainability to create intellectual creation.

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In Indonesia, the big problem is awareness of people (community and campus) to build patent culture, so can catch up the indigenous technological capabilities. We should create the aware people and the strong government to enforce patent as legal construction by make aware and empower the Indonesian people.

C. Conclusion and Recommendation

I. Conclusion

From above elaboration, it concludes as follows.

a. Patent as legal construction that give legal protection in order to make legal certainty should be based on high patent culture, supporting cycle of intellectual creation establishment and technological capabilities development. The patent culture building should be conducted continuously to create higher patent awareness and patent culture, and it can be indicated by the improving patent subscription, awareness to obtain patent and using it, and high interest to produce new technology. It needs participations of related parties such as Technology institution (BPPT), Industrial and Commerce institution (Disperin/dag), Directorate General of IPR (Ditjen HKI) and IPR consultant or IPR, and other related departments in its development to realize indigenous technological capabilities.

b. In order to support obtaining indigenous technological capabilities in the cycle of intellectual creation frame, the patent as legal construction should not stop to the step where inventor obtains the intellectual property right only, but it should continue to change invention becomes royalty. Socialization and trainings should be continued for the society to improve and perfect patented technology. Trainings should also focus on making patent specification claim, caused of the claim is the essence of invention.

II. Recommendation

1. Patent awareness, especially patent culture in Indonesia should be improved by the synergy of inventor, campus, NGO and government, to be new invention, innovation, improvement and improvement on the improvement.

2. Patent as legal construction should be enforced by strong government and empowered by aware people.

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