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The Protection of Employee Inventions on Private Employment Relationship in Pharmaceutical Industry in Indonesia

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ABSTRACT

The reciprocal relationship between company and employees such as in the pharmaceutical industry then creates a dilemma for solving the problem regarding the employee responsibility to the company, and company recognition for employee invention. This paper will discuss and analyze the problems of employee ownership of inventions in patent law regime in Indonesia, compared with those in developed countries. In Indonesia, the settings of employee inventions are not dealt explicitly in Indonesian patent law such as in the Patent Law of 1986 and the latest, the Patent Law of 2016. The Law set implicitly that employee inventions are inventions that resulted in employment status or inventions generated using the employer's data and facilities. The results showed that the settings of ownership of employee inventions that clearly rely on the doctrine of hired to invent and shop-rights which was adopted in the advanced industrial countries prove to be conducive to create a supportive climate of innovation and the progress of scientific and technological invention by workers, and by the company. The concept of employee inventions that have not been expressly provided in the Patent Law of 2016 and has not yet adopted the doctrine of hired to invent or shop rights is considered more profitable to employers or companies, than to employees, to have exclusive rights to the patent and exploit freely on the invention produced.

Keywords: Employee Inventions, Hired to Invent, Patent Law, Indonesia
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INTRODUCTION

The strength and success of a country will be determined by the ability of creating and controlling the scientific and technological factors (Flyvbjerg, 2001). These factors nowadays have been the main factors to the increasing competitiveness that have replaced economic capital, land and energy that have been massively exploited in the last century. It is undeniable that the development of science and technology is the source of innovation climate as a foundation of inspiration to the growth of human resource creativity, which in turn can be a source of economic growth and competitiveness (Directorate of Research and Community Service, Ministry of Research and Higher Education, 2015)).

Science and technology are basically sourced from intellectual creativity resulted from processing human thought, or exploration of mind (Galloway et al., 2010). The emerging human creativity through inventions as one's intellectual assets has a positive, significant effect on the development of science and technology (Roisah, 2015). Growing human intellectual creativity through such various creation works in the field of copyright works, art and literary works which have invaluably contributed to modern people's lives (Bontis, 2004). Hence, it is necessary for stakeholders as well as government to provide legal certainty and public order to ensure appreciation, respect and protection of human intellectual abilities. Thus, such recognition and reward are highly required to the personal creativity with a legal order that is nowadays largely known as the legal regime of intellectual property rights (IPR) (Siswandi. 2002).

Patent as one of the important objects in the intellectual property laws is defined as an exclusive right granted by the state to the inventor of his or her invention in the field of technology, which for a certain period of time exercises his own invention or gives his consent to the other party to exercise it. The invention here refers to the idea of an inventor being poured into a technologically specific problem-solving activity, be it a product, process, or a refinement and development of a product or process.

The development of human needs of the easier and more efficient product and services now are profoundly supported by technological advances through inventions and discoveries in many scientific fields. Demands for products and processes of invention in the field of technology have been growing in terms of quality and quantity to meet various human needs. The demand that is done by presenting an entirely new product or consumer's product is measured by the level of its competitive advantages, whether it is more practical, faster, more environmentally friendly, or other 'comparative' measures. Thus, it can be considered that generating a new product with more advantages is a form of a business strategy underlying the company's values in producing sustainable products in the market competition. The condition forces companies to mobilize all resources owned, such as by exploiting the employees' capability in research and development (R&D) or even by ordering the whole range of departments for doing research, assessing and delivering innovative products with the specific advantages of the company's products (Spender & Strong, 2010). These conditions are contemporarily no longer peculiar for both consumers and companies, as being done massively by such large companies as information technology-based companies, online stores, social media platforms, media and internet companies. Hence, the employees are the focal point to produce innovative products or processes that are technically feasible and have high economic value (Thediek et al., 2013), as the basis of the company long-term success and sustainable growth (Janssen, 2000).

The results of this employee innovation then become the foundation for what is later called employee inventions.

The development of increasingly sophisticated and complicated new technology is now almost impossible to realize without the support of adequate facilities, qualified equipment, large-scale research materials, and large cost. This is why, today, most of the technological inventions are created by companies and research institutions, rather than individual researchers. Since the employees both individually and collectively are given more space by companies to materialize their constructive ideas, the work of company invention is then closely linked to employee inventions.

For many enterprises, an invention, how and from whom it was produced, is basically owned by a company as the intellectual asset to improve the competitiveness of the company's products and benefits (Pisegna-Cook, 1993; Ambler & Wilson, 1995). This is supported by the fact that employees are tied to the employment contract, where they use company resources and facilities, making the solely submit the productive their works for company benefits (Pimantoro, 2015). On the other hand, for creative and inventor workers, it would require recognition and appreciation for their efforts to generate the invention. This provision is considered to be a problematic issue when faced with the fact of an unbalanced bargaining position between workers and companies. The patent arrangement and relationship between employees and employers is more complex in capital-intensive industries, such as in the pharmaceutical industry, which is very dependent on the invention of the employees (Caves et al., 1991; Lehman, 2003; Koshy, 1995; La Croix, & Kawaura, 1996; Haley & Haley, 2012; Wagner & Wakeman, 2016). Hence, this paper will discuss and analyze the problems of employee ownership of inventions in patent law regime in Indonesia, compared with those in developed countries. This study discussion is especially limited to the scope of employee's invention in private relations. Moreover, the invention in this study refers to the patent.

PATENT INVENTION IN EMPLOYMENT RELATIONSHIP

In the early development, patent law gives patent rights in the form of exclusive rights granted to the individual inventor. In the next decades when technology is more sophisticated and cutting edge, innovation in the field of technology is almost no longer possible without requiring a huge cost, advanced facilities, and experts. Technological invention that has a value of novelty is now rarely performed by individual inventors but is usually carried out by collective inventors who are usually funded by sponsorships from government, private institutions, or companies (Etzkowitz, 2008). However, such conditions then have an effect on the ownership or the right holders of the invention.

In some countries, there are four kinds of patent holders, namely (a) the patent holder is derived from the invention due to employment relationship or so-called employee inventions; (b) the patent holder is derived from the invention by order from another party, or called independent contractors; (c) the patent holder is derived from the invention produced jointly, or known as joint inventors; and (d) the patent holder from the invention produced, known as joint owner which consists of more than one person, or legal entity (Suryo, 2010).

Generally, the invention patented resulted from labor relations or known as employee's inventions can be divided at least into three (Perkmann et al., 2013). First, company patent means the invention of a patent by an inventor or several inventors in his/her or their capacity as an employee (s) under a contract of employment with a company that employs them to undertake or find an invention (Blind et al., 2009). Second, government patent, which means a patent by an inventor or some inventors in his/her or their capacity as an employed (s) under an employment agreement with a government agency that employs them to create an invention (Lei et al., 2012). Third, a university patent means a patent performed by an inventor or several inventors in his/her or their capacity as a student (s) or lecturer/faculty who are incorporated in a university research conducted using university facilities (Lee Y. J., Patent rights and Universities: Policies and Legal Framework for Korea, Thesis di Universitas Queen Mary, London.).

THE SCOPE OF EMPLOYEE INVENTIONS

The employee inventions were highly related to their status as one who works with wages or other forms of remuneration (Article 2 of Law No. 13 of 2013 concerning Labor). Accordingly, it can be derived from three common law principles regarding employee inventions. First, if an employee is not employed specifically for the purpose of creating something, then whatever he or she creates during the work will be owned by the employee. No implicit agreement arises to assign any patent to the employer. This general rule applies even if the invention is related to the employer's business.

Second, when an employee is employed for invention purposes, but the employer does not give any conceptual guideline or the desired result, and does not provide what should be used as a means of employee to achieve a certain result, the resulting invention, even if it were related to the employer's business, it will be owned by the employee. Third, if an employee is hired to make specific inventions and that the employer can provide any means to bring ideas into practice that is clear to the employee, the employer will be considered the owner if the invention is within the employment scope and employer-related business (Wolfson & Lease, 2011).

These common law principles are commonly called the principle of 'hired to invent' (Hovell, 1982), meaning that the ownership of an invention in the employment relationship belongs to the employer, if the invention is produced by an employee or who was given the task to produce the invention (Simmons, 2012). The employer must also give any means needed to bring ideas, sufficient infrastructure to produce the invention (O'Connor, 2011). Consequently, if the resulting invention is outside these stipulations, the employer is not entitled to the invention.

EMPLOYEE INVENTIONS ON PATENT LAW IN INDONESIA

The regulation of employee inventions in Indonesia is implicitly stipulated in Article 12 of the Patent Law. It regulates inventions resulted within the employment relationship and does not clearly set out the definition of employee inventions. The invention stipulation by employees regulated in Article 12 of Law No. 13 of 2016 only states that those entitled to a patent for an invention resulting in an employment relationship is the

party providing such work, unless agreed otherwise (Djumadi, 2016). Such provision shall also apply to inventions produced either by employees or workers who use the data and/or the means available in their work (Payumo et al., 2014). Inventors are entitled to receiving the exchange for economic benefits from the results of his invention and are eligible to be included in the patent certificate. Based on the stipulation specified in Article 12, there are several important elements that determine the scope of employee inventions namely (a) the invention, (b) the working relationship, (c) the inventor, (d) the employer; and (e) the compensation.

Invention

Based on Law No. 13 of 2016 on Patents, the invention is the idea of the inventor set forth in any activity of solving a specific problem in the field of technology, that can be a product or process, or the improvement and development of products or processes. While an inventor is defined as a person or several people that are jointly implementing an idea in an activity that produces the invention (Wagner, 2016). An invention within the scope of the patent must have novelty, an inventive step and capable of industrial application. An invention will be considered new if an invention does not exist at the time applied for a patent. In other words, if there has been a disclosure of previous invention during the time a patent application is submitted, the invention is no longer considered a new invention. Thus, by itself it cannot be patented.

An invention is considered new if on the filing date, the invention is not the same as the technology previously disclosed (Ziedonis, 2007). This such stipulation has some implication. First, it has not ever been announced in Indonesia or abroad either in writing, a verbal description or by a demonstration, the use of, or by any other means that allows an expert to carry out the invention before the filing date, or the date of priority. Second, the other application documents were submitted earlier in Indonesia, published after their substantive examination. The exceptions for this provision are not considered to be announced within 6 months before the filing date of invention. More specifically, the invention has: (a) exhibited in an official exhibition in Indonesia or abroad; (b) used by the inventors in trials for other research and development; and (c) announced by the inventor in a scientific forum (Articles 5 and 6 of the Patent Act). Invention is still considered new if within 12 (twelve) months prior to the filing date, no other party announces in violation of the obligation to keep the invention secrets.

Moreover, the invention involves an inventive step (Australia, 2014), if the person skilled in the engineering is unpredictable or non-obvious (article 7 of Patent Law). A person, who has a certain skill in engineering or skilled in the art easily creating an invention, is not included in the stipulation of an inventive step. Invention containing no inventive step is concluded from a court decision from several jurisdictions. This provision implies that patent is (1) a mere resizing of a product, making a portable product, a reversal of part of prior inventions, the change of material, a mere substitution by an equivalent part or function, merely combining the known and used inventions, simplifying an element of another incorporating invention (Kami, 2006).

Employee

Indonesia's Patents Act of 2016 does not set forth what is meant by the worker or employee (Marzuki, 1999). However, definition of workers can be found in Act No. 13 of 2003 on Labor, stating that a worker/laborer is someone who works for a wage or other forms of remuneration. The workers referred to in Article 12 of the Patent Law means any worker who worked in the employment relationship. The worker in the employment relationship is every person who works on a job given by an employer by a work contract. Every job invention produced by workers in the employment relationship using the facilities, data, and infrastructure of the employer belongs to the employer. In this context, workers do not have ownership rights over his invention. The Patent Act only regulates remuneration or compensation as a right of employees who find invention that having economic benefits in an employment relationship (Owan & Onishi, 2010). Workers producing the invention also have to remain named as inventors in the patent certificate. There is no further guidance on the obligations of workers within the scope of employee inventions.

Work Relationship

In the Patent Act, there is no description about the working relationship between the inventor of workers and employers. Labor Law No. 13 of 2003 explains that the employment relationship is the consequence of the work agreement between the employer and the recipient of work either written or unwritten. Agreement contains rights and obligations between the employer and the recipient to carry out any work. Employment is the relationship between employers and workers/laborers by employment agreements that have an element of work, wages, and command.

In this context, the employment relationship referred to in Article 12 of the Patent Act of 2016 is the relationship between the employer that is the person/legal entity and the recipient that is an ordinary worker, researcher/inventor either for generating invention or not. The elements of the relationship consist of (1) work resulted in the invention or not, (2) wages as compensation given by employers for researchers/inventors or for ordinary workers, and (3) order from the employer to the researcher/inventor or to ordinary worker of what the invention should be produced by the inventor or another job based on a work contract (Ying, 2007).

The working relationship in this article does not specifically regulate the relationship between employers and inventors to produce the invention. Thus, based on this article, every invention produced by workers either included in the agreement or not, with or without command that produces the invention, is entitled to the employer.

Patent law and the Labor Law do not regulate employment invention agreement as the agreement made between the employer and employees in charge of producing the invention (Irawan, 2011). Employment invention agreements should contain the terms, rights and obligations of the parties relating to the invention which will result in the employment relationship. Employment inventions agreement should include details on all the elements relating to the rights and obligations for the parties to avoid a dispute (Howell, 2012).

Employer

The employer is an individual, business, corporation, or other entity that employ manpower by paying them wages or other form of compensation. The employers

referred to in the Law No. 13 of 2003 are individual, partnership or legal entity that (a) operates its own firm, (b) independently operates company, and (c) represents the foreign company.

Based on the Patent Law, the employers within the scope of employee inventions have the right to obtain patent rights to an invention generated by employees on terms and conditions that the invention is produced under employment contracts or by using employers' data or facilities. As compensation, the employer is obliged to provide remuneration or compensation to employees producing an invention (Giummo, 2010).

Accordingly, the employer has the exclusive right to the patent to control the overall patent either to execute its own or to give permission to others to carry it out. These exclusive rights also include the right to make, use, sell, import, lease, assign, or available for sale or rental or delivery of the product by the patent. If the produced invention is in the form of a process patent, the employer is eligible to the right of using the patented process to make products and sell goods. On the other hand, the name of employee is eligible to be written in the certificate of the patent as the inventor, and to receive compensation in return for his invention.

Compensation

Compensation or rewards in the scope of employee inventions is the employee right because of his invention (Harhoff & Hoisl, 2007). The Patent Act provisions regarding compensation are set properly in order to maintain the rights that should be received by the employee.

The amount of remuneration of the invention produced by an employee may be determined by an agreement of both parties, employee and employer. If there is no agreement between the parties, the decision on the amount of remuneration will be submitted to the Commercial Court. Reward or compensation to these employees may be paid (a) in a specific amount and at the same time; (b) based on the percentage; (c) in the combination of a lump sum together with a bonus, (d) combined between percentage and bonuses, or (e) other form agreed by the parties.

The existence of the full freedom for the parties to negotiate and agree with each other on the amount of remuneration and form of payment, only occurs in inventions by employees in private firms or non-governmental agencies (Banerjee, 2008). Although this can be seen as an advantage for the employees, it can be a weakness and shortcomings, because in practice the employees often are those who have a weak bargaining position compared to the company's position as an employer (Howell, 2012).

Based on the provisions on employee inventions embodied in Article 12 of Patent Law, the inventions within the scope of employee inventions should contain the following elements: (1) Invention is produced inside or outside the scope of the employee's duty to produce invention; (2) the relevant invention produced by the workers using the employers' facilities, data or financial support; (3) the relevant invention produced by workers in employment; (4) the relevant invention produced by the workers in the workplace, not explicitly or implicitly risky; (5) the invention is produced by workers in working time; (6) the relevant invention produced by the workers as agreed to or not agreed. Thus, the intention is that the workers are employed to produce the invention, help generate complete invention or invention that has been started earlier.

SETTING THE OWNERSHIPOF EMPLOYEE INVENTIONS

Indonesian Patent Act implicitly states that the invention falls within the scope of employee inventions, when the invention resulting in an employment relationship or invention produced by using the employer data and/or the means available (Drahos, 2008). The invention includes all produced by the inventor employees in his tenure or was bound in an employment relationship. Inventor employees does not distinguish whether as a regular employee or the employees specially assigned to produce inventions (the employees who are hired to invent).

Likewise, any resulting inventions by inventor employees does not depend on the scope of duties of employees as stipulated in the agreement. This includes every invention that is resulted by employees on the basis of orders. The invention is not limited to whether it is related to the business of the employer or not and generated by employees in the workplace specified explicitly or implicitly. This provision also includes every invention that is produced by the employees to use the employer data and/or facilities, available in his job despite his agreement not obligated to produce the invention.

The scope of employee inventions in the laws is very broad, and is not in harmony with the doctrine of 'hired to invent' that is set as the basis of employee inventions in many countries (Coriat & Weinstein, 2011). Based on the doctrine of hired to invent, the employee inventions should be limited to those produced by employees or workers in accordance with the scope of the duties under the work agreement specifying that they are hired only for producing the invention.

The settings of employee inventions in private employment relationship within the legal system of patent law in Indonesia from 1989 to 2016 are not significantly changed. For setting the mutual ownership between employees and employer, several considerations need to be re-arranged. First, the scope of arrangement of Article 12 regulating the inventions produced by employees. Although employees produced the invention without the use of data or the company's facilities and are not purposively employed on generating invention, the rights to the invention will belong to the employer. While the employer or company will get exclusive rights on inventions produced by employees, the employees are entitled to remuneration in addition to fixed written his name as the inventor in the patent certificate. The unclear limitation and scope of employee invention would be detrimental to the employees. In addition, the provisions of Article 12 also state that if the employees are initially not employed to produce an invention, but if in the future the employee works produce the invention using data or corporate facilities, the ownership of the invention will be owned by the employer.

This is different from the ownership of employee inventions in the system of patent law in many countries that will only be given to the employer or company when inventions were produced by employees during the work and inventions generated within the scope of duties of the employees, under the doctrine of hired to invent. The different conditions are found in patent law systems of

many countries such as Germany, Japan, South Korea and Austria, specifying that status of employee invention ownerships is entitled to a non-exclusive license. When employees are hired specifically to produce invention, but the invention has nothing to do with the business of the employer/company, and the employees can prove that the invention is produced without the use of employer supporting facilities, data, guidance and counseling from the company, the employee will be the owner of invention. In this respect, the Indonesian patent laws does not explicitly or implicitly set this matter, in which the ownership of employee inventions by patent laws in Indonesia will be exclusively owned by the employer or company (Endeshaw, 2016).

Secondly, the lack of the clear arrangement of employment invention agreement allows the unclear rights and obligations of both employees and employer pertaining to the inventions. The principle of freedom of contract may harm those who have a weaker position of bargaining, that are mostly experienced by employees (Pittard, 2013). Hence, almost all regulations concerning employee inventions in all countries have specified that if there is a clause in employment agreement stating that the employees are obliged to give the patents of all inventions (although not the employee inventions) to the employer, the agreement will be declared unlawful (Harhoff & Hoisl, 2007). Then, the agreement that does not regulate compensation for employee inventions will be considered invalid. This is an important aspect to include in the Indonesian Patent Law, that has not set this matter clearly. Such clause is important to protect the employees and company arbitrariness in utilizing the principle of freedom of contract.

The doctrine of hired to invent, that has been largely adopted in many developed countries, means that a special labor agreement that contains information that the employee is employed by a special task only for generating an invention is highly needed (Roisah et al., 2018; Roisah et al., 2017). In Indonesian Patent Law, the borderline between employees and employer based on the doctrine hired to invent is unclear. As a consequence, the company may have the burden to prove that the employee was employed to produce the invention. In addition, the company's dependence on this doctrine is considered very risky (Wright, 2002).

Third, the lack of clarity in adopting the principle of the doctrine of 'shop-right' or 'hired to invent' in article 12 of the patent law in Indonesia is considered more favorable for employers or companies. The doctrine of shop right is the right of employer to obtain non-exclusive license without the obligation to pay royalties to the inventor (Harhoff & Hoisl, 2007). This doctrine is limited by such conditions as the absence of an agreement between the parties, no agreements specifying that employees are hired to produce the invention, and the absence of specific tasks that must be carried out by employees in order to produce an invention (Zimmerman et al., 2001). This doctrine is regarded as being able to give more protection to employee inventions in which they are the patent owner on this invention and acquire exclusive rights to give permission or license to others to use the patent. On the other hand, the employer will be protected by the doctrine of 'hired to invent' meaning that employers will be fully entitled to inventions of it employs the employees with a special purpose or a special duty to produce the invention. The justification of this doctrine is because the employees have agreed to the employment with an appropriate salary to compensate for that (Pittard et al., 2013; Roisah, 2014).

However, article 12 of the Indonesian Patent Law has not yet adopted the doctrine of shop-right, because the article does not clearly mention the right of companies or employers to obtain non-exclusive licenses on inventions that are not included in employee inventions. The broad scope of employee inventions provides many advantages for the company to obtain the exclusive right to patent that is not specifically categorized as employee inventions (Roisah, 2018). Therefore, it is important to set clear limits on the scope of employee inventions in the laws and regulations with a view to protect the rights of the parties and avoid disputes (Roisah & Raharningtyas, 2019).

The ownership of employee inventions by the employer will happen if the invention is produced by the employees in their employment in accordance with the scope of their duties to only produce inventions generated using the company's data and facilities. On the other hand, employees are protected by the doctrine of shop-right of 'non-exclusive rights' on an invention (Howell, 2012). Patent laws in common law systems rely on the ownership of employee inventions in the contract of employment inventions between both parties (Geuna & Rossi, 2011). The absence of such contract allows the ownership of employee invention by the employer only if the invention produced is still within the scope of duties of the workers. On the other hand, the employer has a 'non-exclusive right' when the invention is derived not within the scope of duties of the workers but using data and facilities belonging to employers/corporation. If there is a case outside these conditions, thus the invention is fully owned by the inventor workers.

CONCLUSION

Setting ownership of employee inventions in the patent law system in many countries can be categorized into two categories, namely ownership by the employer/company and ownership by the employee inventor. The clear and mutual arrangements of employee invention ownership in many developed countries are based on the doctrine of hired to invent and the doctrine of shop rights. The settings of employee inventions are not dealt explicitly in Indonesian patent law such as in the Patent Law of 1986 and the latest, the Patent Law of 2016. Article 12 of the Patent Law of 2016 set implicitly that employee inventions are inventions that resulted in employment status or inventions generated using the employer's data and facilities. Article 12 gives understanding that the originality of ownership of employee inventions will be entitled to employers/company. Such broad definitions allow the possible disputes of ownership if only one of these following conditions is met. First, the invention may be produced inside or outside the scope of the employee's duty to produce the invention. Second, the invention produced by the workers using the facilities, data or financial support from the employer or the employer. Third, the invention is produced by workers in employment. Fourth, the invention produced by the workers in the workplace. Fifth, the invention is produced by workers in the working time, and the invention produced by the workers may be explicitly agreed to or completely not agreed.

The settings of ownership of employee inventions that clearly rely on the doctrine of hired to invent and shop-

rights which was adopted in the advanced industrial countries prove to be conducive to create a supportive climate of innovation and the progress of scientific and technological invention by workers, and by the company. The concept of employee inventions that have not been expressly provided in article 12 of the Patent Law of 2016 and has not yet adopted the doctrine of hired to invent or shop rights is considered more profitable to employers or companies, than to employees, to have exclusive rights to the patent and exploit freely on the invention produced. At a larger scale, this condition will allow less capability of creating a conducive climate for workers to produce innovative invention.

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