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Determinants of Indonesia's Industrial Technology Development

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Most of the developing countries (hereinafter DCs) increased their technological base apart from the developed nations, but they also depend on the existence of the local uplift created by the technology of Research and Development (hereinafter R&D), evaluate alternative options for the transfer of technology (hereinafter TT) in line with timely resource endowments and socio-economic development objectives, and, finally, efficiently utilise this technology to heighten their living standard. Nowadays, in light of the Paris Convention of 1883, new challenges are being faced due to the increased use of the patent systems in the knowledge-based economy and the growing sensitivity to the patent system's social and economic role in society. This paper addresses and highlights today's international challenges surrounding the international patent system. In Indonesia, there are even regulations on the TT that have been issued, but there is no special regulation for it. Beside that, the Capital Investment Coordinating Board (BKPM) can also assess the technology component of investment proposals but has made little use of this authority due to lack of technical expertise. Some of these provisions may have to be amended in light of the TRIPS Agreement. Currently, as of 27 July 2018, the President of the Republic of Indonesia enacted Regulation No. 36 of 2018 on the recordal of IP Licensing Agreements. Meanwhile, on 24 February 2016, the Ministry of Law and Human Rights issued Ministerial Decree No. 8 of 2016 concerning the Requirement and Procedure of Intellectual Property License Recordal, which serves as an implementing regulation for the recordation of IP licenses. Finally, both the Regulation of Government nor the roles of Indonesian government have failed to create technology development (TD), as well as TT for Indonesia. No doubt, TT is truly emphasised as a principal means of uplifting the living standard of Indonesia's peoples. Moreover, there is no evidence that shows a correlation between the recordal of IP licensing agreements under both of the regulations above, TD under the Patents system, and

the collective mastery of a nation to access knowledge and technology effectively to develop its standard of living.

Key words: *Technology Development, Technology Transfer, Regulations, Indonesia.*

Introduction

The power of developing countries as well as uplifting the living standard of their peoples largely depends upon the development of human resources and science, as well as an increase in research and development (R&D) capabilities. Hence, sooner or later, every country has diverted its major endeavour and potential towards the research and development of its technological capabilities, and with it, the industrial base of the country.

Since the Second World War, science and technology has been a priority not only for developed countries but also for DCs as a way to increase the welfare levels of their peoples. The development of a nation's science and technology is an essential condition for its industrial growth.

Most developing countries (hereinafter DCs) increased their technological base apart from developed nations, but they also depend on the existence of the local uplift created by the technology of Research and Development (hereinafter R&D), evaluate alternative options for the transfer of technology (hereinafter TT) in line with timely resource endowments and socio-economic development objectives, and, finally, efficiently utilise this technology to heighten their living standard (WIPO,1977: 17).

It is generally argued that technology is rarely transferred to a country without securing its protection against illegitimate exploitation. An inventor would not provide any technical help or know-how that might be detrimental to the protection his patent provides. As far as TT is concerned (WIPO, 1977: 17) mentions:

"The identification and reduction the obstacles to the transfer of technology to developing countries, the facilitating of access by developing countries under fair and reasonable terms and conditions to technology, the facilitating of the utilization of technology transferred to developing countries in such a manner, as to assist these countries in attaining their trade and development objectives, the development of technology suited to the production structures of developing countries, the adoption of measures to accelerate the creation of indigenous technology, the dissemination of information on relevant technologies, the adaptation of commercial practices governing the transfer of technology to the requirements of developing countries, and the prevention of the abuse of the rights of transferors of technology, these are the key elements in promoting the transfer of technology to developing countries."

Technology flows take many forms and cannot be easily measured. With regard to TT, Michael Blakeney (1989: 29) states:

"In practical by which the commercial transfer of technology is effected involve consensual legal arrangements. Thus, the legal infrastructure within a developing country, its laws, court system, administrative bodies, and legal practice will have an important bearing on the structure and form of the legal arrangements by which technology is to be transferred to that country."

Further, Article 7 of the TRIPS Agreement stipulates:

"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."

As far as TT is concerned, S. K. Verma (Verma, 1987, in Sangal and Singh (eds.): 21, 26) said:

"An inventor would not provide any technical help and know-how for the exploitation of his invention in conditions which might deprive him of the protection his patent provides. The system of patent protection provides to the transferor of technology and foreign investment the requisite legal framework."

Further, in this context, Beier (1980: 563, 584) observes that:

"It is only patent protection which gives enterprises the necessary incentive to file their important inventions abroad and convert an invention into an object of international trade that can be transferred without too great a risk."

On the other hand, Hans (Hans Peter Kunz-Hallstein, 1975: 427, 432-433) said:

"…. the role of patents has been found to be very insignificant in TT transactions."

On the subject of TT and investment decisions, Twinomukunzi (S. Twinomukunzi, 1982: 31, 59) added:

"….The investment climate, economic, political and other considerations, such as taxation laws, foreign exchange control regarding repatriation of profits, guarantees against

expropriation and foreign investment laws in general: these are more valuable and important considerations than the IP system."

Further, according to the Secretary-General of the United Nations, (Report of the Secretary-General of the United Nations, United Nations Doc. E/3861/REV, 1 March 1964: 4), "Technology, at times, is transferred without reference to the patent system."

As far as TT is concerned, Indonesia has been set in Government Regulation No. 20 Year 2005 on Technology Transfer Intellectual Property and Research and Development by the Universities High and Research and Development Institute delegated in Act No. 18 of 2002 on Sisnas P3 IPTEK. The purpose of technology transfer of intellectual property and the results of research activities and development are namely:

"1. Disseminate knowledge and technology; 2. Improve the ability of communities to take advantage of and master science and technology for the benefit of society and state."

However, dissemination is found in various regulations, for example, the Capital Investment Law of 2007 to replace the Foreign Investment Law of 1967 (abbreviated F.I.L), as amended by Law No. 11 of 1970 and the Domestic Investment Law of 1968. Besides that, the Department of Health requires that, for drugs registration purposes, the information regarding relevant licensing for new, innovative, and ready-made drugs be given upon filing of the application.

The Patents Act of 2016, which replaced the Patents Act of 2001, 1989, and 1997, under Article 20 emphasised:

"The importance of uplifting inventions and supporting the development and exploitation of new inventions for the industrial growth of the country. The patents aimed to encourage inventors and to secure its working on a commercial scale in Indonesia and to the fullest extent that is reasonably termed, efficient, and without undue delay."

In order to transfer know-how, both Foreign Investment and Domestic companies are obliged to conduct and/or provide facilities for the training of the Indonesian workforce. Article 10 of Law No. 25 of 2007 on Investment Law, states:

"In addition, all companies employing foreign workers are obligated to conduct an education and training program for all Indonesian workers. The program may be organized by the employers or third-party services may be utilized (Article 8 of the Presidential Decree No. 75 of 1995). The non-performance of this obligation results in employers employing foreign worker(s) to pay a compulsory educational and training contribution. Such contributions will

be used to fund the Government's manpower education and training program (Minister Manpower Decree No. 142 A/MEN/1991 on Educational and Training Obligatory Payments)."

Meanwhile, "Contractors of oil and gas production-sharing contracts are required to provide an education and training program for all Indonesian employees," is clearly stipulated under Article 12 of the Government Regulation No 35 of 1994 on Oil and Gas.

In the Intellectual Property Rights (IPRs) especially in the industrial property rights field, under Articles 78, 79 (3) of the Patents Act, 2016; Article 42 (6) of the Trademark and Geographical Indication Act, 2016; Article 8 of the Trade Secrets Act, 2000; Article 35 of the Industrial Design Act, 2000; Article 27 of the Lay out of Integrated Circuits Act, 2000; and Article 82 (1), (2), 83 (2) of the Copyright Act, 2014, mention as follows:

"A licensing agreement shall be prohibited to contain provisions that may directly or indirectly give rise to effects which damage the Indonesian economy, or to contain restrictions which obstruct the ability of the Indonesian people to master and develop technology. The Directorate General shall refuse any request for registration of a licensing agreement containing provisions as indicated above."

In Indonesia, on 24 February 2016, the Ministry of Law and Human Rights issued Ministerial Decree No. 8 of 2016 concerning the Requirement and Procedure of Intellectual Property License Recordal, which serves as an implementing regulation for the recordal of IP licenses. Further, on 27 July 2018, the President of the Republic of Indonesia issued Regulation No. 36 of 2018 on the Recordal of IP Licensing Agreements.

Objective of Study

1. Whether the regulations are effective for the development of technology?

2. The roles of government in technology development and technology transfer.

Field of the Study

This paper aims to analysis both of the Government Regulations, as mentioned above, the statutory Patent Laws, and the government policies to assess the adequacy of technology development (TD) and TT in Indonesia.

Research Methodology

This study employed a combination of library research and survey, but predominantly library research of national statutes, regulations, relevant books, journals, articles, law reports, reviews, conferences, and seminar papers.

Indonesian Patents Law No. 13 of 2016

As discussed above, on the one hand, Indonesia has some regulations governing technology development (TD) and the transfer of technology (TT), but on the other hand, has no special regulations.

Licenses of Rights

With regard to licenses, Thalib (Abd Thalib, INFORMATION, An International Interdisciplinary Journal, Vol. 19 Number 6(A) June, 2016: 1720), remarked as follows:

"Most of the countries regulate a system of license in their patent laws as a means in order to anticipate the inherent deficiencies in the system of compulsory licensing. We call this an automatic licensing system. Systems of licenses of right is a voluntary as well as non-voluntary restriction on the exclusive monopoly of the patentee's right, in the public interest. Voluntary means that under this system, a patentee may safeguard his patent from a compulsory license application."

Further, as far as patent licensing is concerned, Abd Thalib (https://pdfs.semanticscholar.org/6247/5edc53c11b3aabaedb75d3637e81b106be16.pdf), views as follows:

"It is non-voluntary in the sense that after the lapse of particular period (generally it is three years) from the date of grant of a patent, the government can apply to the Controller to have a patent endorsed with the word "licenses of right". Additionally, there is also a third type of this system where the endorsement of a class of patents with the words "license of right" is made by the statute itself."

As far as license contract agreement is concerned, Ladas viewed (Stephen P. Ladas 1975: 429) as follows:

"In some cases, this system may be specially used by developing countries because once a patent is thrown open to the public (to license of right), it will no longer depend on the will of the appropriator of the patent whether the patent will be worked in the country. Anybody

can obtain a license and, on the basis of that license, work the patented invention in the country; however, this system has also been criticised by saying that 'the disadvantages of this system is that prospective licensees hesitate to obtain such a non-exclusive license, since competitors can obtain the same at any time'."

Article 76 (1) of the Patents Act, 2016 stipulates:

"A license may be expressed, implied or statutory, and it may exclusive, non-exclusive or limited. An exclusive license is defined under Article 76 (1). Such a license excludes all other persons, including the patentee, from the right to use the invention. In a limited license, the limitation may pertain to persons, place, time, use, manufacture and sale".

Further, Article 79 (2) of the IPA, 2016 mentions:

"The agreement between the parties concerned must be reduced to the form of a document embodying all the terms and conditions governing their rights and obligations. An application for registration of such a document must be registered to the Directorate General of Intellectual Property Rights, which shall be recorded and published with the payment of a fee. Where a licensing agreement is not recorded, said licensing agreement will not have legal effects on a third party".

Furthermore, Indonesian Patents Law, under Article 78, excludes certain clauses from such licenses, declaring them to be invalid. The two sorts of clauses are (Abd Thalib, Jurnal Hukum IUS QUIA IUSTUM No. 2 Vol. 23 April 2016: 256-257):

"(i) Provisions that are directly or indirectly detrimental to the Indonesian economy, and (ii) certain limitations obstructing the capability of the Indonesian people to master and develop the technology generally connected with the patented invention, and particularly the invention for which the patent has been granted."

Meanwhile, Articles 11 and 12 of the Investment Law No. 25 of 2007 states that:

"Enterprises with foreign capital are obliged to arrange and/or to provide facilities for training and education at home or abroad for Indonesian nationals in an organized way and with a set purpose in order that the alien employees may gradually be substituted by Indonesian ones."

In addition, Thalib mentioned (Abd Thalib, Jurnal Hukum IUS QUIA IUSTUM No. 2 Vol. 23 April 2016: 257) in Article 8 of the Presidential Decree No. 75 of 1955, "The activity program may be organised by the employers, or third-party services may be utilized." Then,

according to the Minister of Manpower Regulation No. 143 A/MEN/1991 on Educational and Training Obligatory Payments, "The non-performance of this obligation results in employers employing foreign worker(s) to pay a compulsory educational and training contribution. Such contributions will be used to fund the Government's manpower education and training. Beside this, in the oil and gas sector, under Article 12 of the Government Regulation No. 35 of 1994, "Contractors of oil and gas production sharing contracts are required to provide an educational and training program for all Indonesian employees." On this subject, the Elucidation of the Oil and Gas Law No. 22 of 2001 does not give further explanation.

It is noted by Thalib (Abd Thalib, Jurnal Hukum IUS QUIA IUSTUM No. 2 Vol. 23 April 2016: 257) that the General Policy towards the skill problem of Indonesian national manpower is that efforts should be made to enhance knowledge, improve skill, and organisational and managerial abilities. In pursuance of this General Policy, we may emphasise that within the framework of mineral oil and gas mining, the above mentioned efforts should also be made by the Government, i.e., the State Oil Enterprise.

Finally Thalib, (Abd Thalib, Jurnal Hukum IUS QUIA IUSTUM No. 2 Vol. 23 April 2016: 257), added the following:

"On the one hand, these laws were intended to invite private foreign capital to be invested in projects which will contribute to the healthy development of Indonesia's economy. Pursuant to the law on industrial affairs, selection and transfer of foreign industrial technology that is strategic in nature and needed for the development of domestic industry. On the other hand, as indicated above, the license agreement between the parties concerned must be reduced to the form of a document embodying all the terms and conditions governing their rights and obligations. Hence, such document must be registered to the Directorate General of Intellectual Property Rights, which shall be recorded and announced with the payment of a fee. Where a licensing agreement is not recorded, said licensing agreement will not have legal effects on a third party. Otherwise, further provisions concerning licensing agreements shall be regulated by a Government Regulation (Article 80 of the IPA, 2016)."

The Decree of Ministry of Law and Human Rights No. 8 of 2016 on The Recordal of IP Licensing Agreements

As far as the recordal of IP Licensing Agreements is concerned, Tilleke & Gibbins (https://www.lexology.com/library/detail.aspx?g=94006ecf-4690-4247-bf4c-9f046c5aca0f), state:

"The Regulation applies to trademarks, patents, copyrights, neighbouring rights, and other intellectual property. The Regulation addresses a previous deficiency in Indonesia in that,

without recordation, parties didn't have the ability to enforce their licensed IP against third parties. Although there was previously a requirement to record license agreements, recordation was not actually possible in practice due to a lack of implementing regulations and guidelines."

In this regard the practitioner mentioned as follows:

"Previously, without the implementing Regulation in place, parties were unable to record their licenses. Thus, the implementing Regulation presents a welcome development for parties in protecting their patents and other intellectual property in Indonesia."

Practices

Furthermore, according to practitioners mentioned:

"In the past, instead of recording IP license agreements, patent or trademark owners would file their license agreements to obtain an official stamp on the documents as evidence of good faith. Trademark owners went ahead with filing their license agreements, despite the fact that it was unclear whether or not they were enforceable against third parties. Filing a license agreement, however, was not considered as official recordation because the process should have involved:

(i) making a request to record a license agreement at the Directorate General of Intellectual Property (DGIP);
(ii) paying the prescribed fees; and
(iii) obtaining an examination of the application to record the license agreement.

An IP license agreement would only be considered as officially recorded if these steps were properly taken and successfully fulfilled, but this was not previously possible due to a lack of implemented regulations and guidelines."

IP license contract agreements should be recorded, otherwise they are not recognised by any third party. Article 15 (4) of the Government Regulation No. 36 of 2018 stipulates:

"A licensee's use of a registered mark under an unrecorded license agreement is not considered as actual 'use' by the IP owner. This can lead to the cancellation of the trademark's registration based of non-use (after three consecutive years), even if the mark was used by a non-recorded licensee."

Under the Ministerial Regulation, a recorded IP license agreement will be valid across the entire territory of the Republic of Indonesia, unless agreed otherwise (Article 7 (2) of the Government Regulation No. 36 of 2018, for a period of five years (Article 10 (1) of the Government Regulation No. 36 of 2018 (Article 10 (1) of the Government Regulation No. 36 of 2018. Although the licensor and licensee may agree on a longer term of validity, recordation of the license agreement would only be valid for five years, and it must not exceed the term of protection of the concerned intellectual property (Article 17 (1) of the Government Regulation No. 36 of 2018). Recordation can be extended (Article 17 (2) of the Government Regulation No. 36 of 2018), subject to the payment of fees in accordance with the provisions of applicable laws (Article 10 (4) (d) of the Government Regulation No. 36 of 2018).

Requirements and Procedures

According to Tilleke & Gibbins (https://www.lexology.com/library/detail.aspx?g=94006ecf-4690-4247-bf4c-9f046c5aca0f), there are two kinds of registration of IP license contract agreement: "1. Recordation can be done either electronically through the DGIP's official website or 2. by submitting a hard copy version of the required documents to the DGIP." The documents are required within ten working days of an application being filed, and the DGIP will examine each recordation application to determine its completeness. In this context, the practitioner's view is as follows:

"It is unknown whether the DGIP would be able to complete the examination within the stipulated period of ten days because for other types of recordation, such as Recordal of Assignment or Recordal of Name/Address Change, it normally takes the DGIP more than one year to issue a Certificate of Recordal."

Ultimately, as far as the Government Regulation and the Ministerial Regulation on IP license agreements are concerned, although recordation of IP license agreements to the DGIP is not compulsory, without registration, it may be difficult to remit royalty payments out of Indonesia. Recordal certificates may be required by the bank to remit royalty payments overseas. The question becomes: is there any sanction for those who are unwilling to apply to register their IP license contract to the DGIP? How about for contracts that disadvantage the economic interests of the nation and challenge the capability of a technology patent? Who authorizes the evaluation of the contracts? There should be an institution to monitor as well as evaluate IP license contracts.

Government's Role in Technology Development and Technology Transfer

With regard to technology development and technology transfer, Abd Thalib (Thalib, UUM Journal of Legal Studies, Vol. 5, 2014: 75-76) states:

"For licensees in developing countries, the unavailability of facilities or resources for research and development (R&D) often renders the licensing of foreign technology rights the only means of obtaining them. Even if the licensee were to embark upon the necessary research, the risk of failure is compounded by the risk that a rival enterprise may be able to obtain industrial property protection in relation to the relevant technology. 'Licensing in' may assist a licensee after a profitable exploitation period, under the name or mark of the licensor, to aggregate the financial, technical, and commercial means necessary to initiate its own research program."

Further, Thalib ((Abd Thalib, UUM Journal of Legal Studies, Vol. 5, 2014: 75-76) stipulated as follows:

"In Indonesia, a major 'unpackaged' (non-equity) mode of technology transfer from advanced country firms to Indonesian firms has been technical licensing agreements (TLAs). Although no quantitative data are available on the number of these TLAs, circumstantial evidence indicates that these TLAs often involve the transfer of older and more mature technologies that do not offer the recipient country a long-term competitive advantage in the global market; however, for a late-industrializing economy like Indonesia, acquiring and mastering these older technologies first is a good way to develop the important basic industrial technological capabilities (ITCs), namely the production, investment, and adaptive capabilities."

Meanwhile, in comparison to China, Qi Liu said:

"In order to protect a patent right, regulate the license acts, and promote the proper usage of the patent right, the State Intellectual Property Office of China (i.e. the "SIPO") enacted, under the Chinese Patent Law and Contract Law, and released the Administrative Measures for Recording a License Agreement ("Measures"), which took effect as of August 1, 2011. According to the Measures, the patent owners could record license agreements officially in order to safeguard their interests over the licensed Chinese patents in China."

Further, Qi Liu said as follows:

"Nowadays, more and more license agreements are concluded due to transnational cooperation, and may need to be recorded with the SIPO. Though the above Measures have

been implemented for several years, there still exist some typical neglects by licensors in practice, which lead to unsuccessful recordal acts before the SIPO. Taking those typical situations into consideration, we think the following points in recording a license agreement at the SIPO shall be kept in mind by all patent owners, especially by foreign companies and individuals."

Furthermore, Qi Liu stipulates:

"We should mention that it is not compulsory for a licensor, typically a patent owner, to record his license agreement under the Chinese Patent Law. The license agreement shall be concluded under the Contract Law in China, and takes effect as of the effective date of the agreement. The recordal is, by no means, the condition for the license to be valid in China."

Finally, Qi Liu remarked:

"Nevertheless, the recordal is beneficial for the sake of the licensor and licensee. For example, after the recordal, the SIPO will publish the basic data (exclusive of the text of the license agreement) of the recorded license agreement, and the publication would go against any third party with good faith. Another example is that, when a local Intellectual Property Office handles an administrative conciliation in a patent infringement dispute, the type, duration, royalty and payment methods etc. of the recorded license would be taken as the reference for deciding the compensation. Moreover, according to the Some Provisions regarding the Applicable Laws for Injunction issued by the Supreme Court, Rule 4, Para 2, the Certificate of a license agreement recordal would be served as necessary proof for the interested party to request injunction. For some Chinese licensees, the recordal of exclusive license against the Chinese patents would be one of the necessary conditions to obtain the qualification as the High and New Technology Enterprises under the related Chinese laws and regulations, with which the Chinese licensee could enjoy many benefits, such as the tax reduction and funding support by the local government."

Conclusion

As discussed and analysed above, neither the Government Regulations nor the Role of Government is effective for the technology development (TD) nor transfer of technology (TT) in Indonesia. As far as technology development and transfer of technology is concerned, there is no reliable and credible evidence that shows a significant correlation between recordal of IP licensing agreements under the regulations of technology transfer and the IP regime and the collective mastery of a nation to access information, knowledge, and technology (INT) effectively, in order to uplift the standard quality of its people's lives.

"The pattern of inward technology flows for Indonesia seems to be dominated by the use of FDI as the main channel for technology acquisition. In some sense, this has been the country's implicit 'technology policy', and the favourable attitude of the government towards FDI has been based, to a large extent, on the promise of technology that will be brought in as part of the investment package. The government has attempted to use some performance requirements in its regulations to affect more rapid transfers of technology. The regulations have been weak, and no specific incentives have been given to encourage FDI that will upgrade local technological capabilities."

Suggestions

As covered by the above discussion of both Government Regulations and the Role of Government for TD and TT, the fruits of this study are two suggestions. First, the Indonesian Government should impose 'unfair' restrictions and conditions for foreign licensors on the grounds of the IP License agreement, as indicated under Article 78 of the Indonesian Patents Law, No. 13 of 2016.

Second, but not least, the following should be added to the Decree of the Minister of Law and Human Rights, No. 6 of 2016 on The Recordal of IP Licensing Agreements:

Article 5 bis:

For those who do not register their IP license agreement as referred to in Article 5 (3) Point b, c and d above and who are proven to break this provision, a strict sanction shall be imposed by the minister, i.e. termination of their license.

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