




Legal Implications of Foreign Investment Relating to Technology Transfer in the Patent Regime

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Article Info	Abstract	
<p>Keywords: Legal Implications; Capital Investment, Technology Transfer; Patent.</p>	<p>Introduction: The issue of technology transfer is a problem that is always faced by developing countries, including Indonesia. Since Indonesia has directed its economic development by focusing on the industrial sector, until the industrial sector has become the backbone of the national economy.</p> <p>Purposes of the Research: forms of technology transfer in investment and procedures for technology transfer in investment activities in Indonesia.</p> <p>Methods of the Research: the method used in this research is normative juridical to analyze the legal problems contained in the legislation related to the problem under study with a qualitative analysis.</p> <p>Results of the Research: the results shown that foreign investment and technology transfer are in inseparable pair. Technology transfer or often referred to as technology transfer includes, product, production processes and machinery. The technology transfer procedure can be transferred by employing individual foreign experts, providing supplies of machines and other equipment. Legal implication in technology transfer can occur in various forms, such as licensing agreements in technology, technology owners can facilitate technology by giving rights to each person/entity to implement technology with a license, expertise and technology assistance.</p>	

1. INTRODUCTION

In the current era of globalization, business activities cannot be separated from various problems, which have a very large impact on the economic development of a country, especially developing countries. In order to accelerate economic development towards stability and economic growth, capital is needed, especially capital from productive projects, because if you only expect capital from foreign aid, this is very limited and you are very careful. This is because the foreign policy of our country is not the same as the foreign policy of other countries. The distinguishing factors are geographical location, wealth of natural resources, population, history of struggle for independence, national interest for a certain period, and the international political situation.¹

The capital needed by the Indonesian state for the achievement of economic development is in the form of investment by utilizing, fertilizing and utilizing domestic capital and foreign capital (investment) to the maximum, which is mainly directed to

¹ Sentosa Sembiring, *Hukum Investasi* (Bandung: Nuansa Aulia, 2009), h. 2.

rehabilitation, change, expansion and new development in the field of goods production, goods and services. Therefore, capital from the general public is mobilized to the fullest. Although investment is very influential on economic growth, it seems that future investment development faces external challenges that are not easy.²

Indonesia is a developing country, to build requires a large amount of capital or investment. Investment activities in Indonesia has been started since 1967, namely since the issuance of Act Number 1 Year 1967 concerning Foreign Investment and Act Number 6 Year 1968 concerning Domestic Investment, and in 2007 the two regulations were combined into one with the enactment of Act Number 25 Year 2007 concerning Investment.³

With the existence of the Investment Act as a legal tool, it is hoped that both foreign and domestic investors will be able to invest in Indonesia. Data the amount of investment invested by investors can be divided into two eras of the New Order and Reformation Order. The New Order period started from 1967 to 1997. The total amount of foreign investment invested from 1967 to 1997 was 190,631.7 billion US dollars and the number of projects it financed was 5,699 projects. The amount of foreign investment invested by foreigners in 1967 was 210.6 million US dollars, with a total of 13 projects. However, in its development, the amount of investment entering Indonesia, from year has increased significantly. Foreign investment that entered Indonesia during the New Order era, the most, namely those that entered in 1995, amounted to US\$39.891.6 billion, with a total of 782 projects. Then, in 1997 it decreased by 6,102.8 billion US. In 1997, the total investment entered was 33,788.8 billion US dollars, with a total of 781 projects.⁴

Investment invested by investors/entrepreneurs have a very important role for local communities because these investments have an impact on the lives of local people and the economy of an area.⁵ Therefore, the presence of investors is expected to be able to move the wheels of the economy both at scale and local and national scale. Investors will come automatically, if various things (legal certainty and security guarantees, conditions of supporting infrastructure, as well as simple, fast, and transparent bureaucracy) that are needed are available to carry out investment. This is because the existence of investment made by investors, especially foreign capital, turns out to have a positive impact on development.⁶

This national economic development intends to realize Indonesia's political and economic sovereignty, in which to realize it, it is necessary to increase investment or investment to process economic potential into real economic strength by using capital originating from within and from foreign parties.⁷ Economic development as an action to utilize more inputs in order to produce more outputs. This activity requires technology because technology can produce more inputs.⁸ Efforts to obtain technology through

² C.F.G.Sunarjati Hartono, *Beberapa Masalah Transnasional Dalam Penanaman Modal Asing Di Indonesia* (Bandung: Bina Tjipta, 2012). h. 21.

³ Salim and Budi Sutrisno, *Hukum Investasi Di Indonesia* (Jakarta: Rajagrafindo Persada, 2014). h. 1-2.

⁴ *Ibid*

⁵ *Ibid.* h. 377

⁶ Sentosa Sembiring, *Op.Cit.*, h. 130

⁷ Ana Rokhmatussa and Suratman, *Hukum Investasi & Pasar Modal* (Jakarta: Sinar Grafika, 2009), h. 11.

⁸ Bakti Trisnawati, "Akibat Kebergantungan Alih Teknologi Bagi Negara Sedang Berkembang," *Jurnal Ilmiah Hukum Dan Dinamika Masyarakat* 16, no. 2 (2019): 185-91, <https://doi.org/10.36356/hdm.v16i2.1027>.

technology transfer are a necessity for developing countries such as Indonesia, because efforts need to be made in various ways in order to encourage economic growth.⁹

Economic developments in the era of globalization have created a climate of increasingly fierce cross border business competition with innovations in technology that have perfected the system of industrial activities. Technology has an important role, especially in creating the effectiveness and efficiency of the production process. The existence of an innovation system shows developments in the dissemination of technology, especially to increase the market activities of transnational companies. Technological innovation then develops into the basic principles of business management which are expected to create international economic integration to encourage technology transfer.

Government intervention in the implementation of technology transfer in Indonesia is very influential for the development of the Indonesian economy in general and the benefit of society in particular.¹⁰ The state must play a role in forcing technology transfer to occur through the rule of law, both *sui generis* regulation and spread to other relevant regulations,¹¹ with the arrangement of technology transfer in *sui generis* special attention from the government regarding this condition it will provide benefits and advantages for the state host to manage the technology transfer it acquires.¹²

Legal arrangements in the field of technology transfer related to foreign investment also need to be considered in the context of the entry of new technology in Indonesia, whether through licensing cooperation or through direct foreign investment, and whether the copyrights holder has the right to grant licenses to other parties under the license agreement.¹³ Based on this, it is necessary to clearly describe how the mechanism of technology transfer from foreign technology owners to Indonesian technology must be, so that the production of a technology is more widespread to developing countries.¹⁴

Article 1 number (2) of the Act of The Republic of Indonesia Number 18 Year 2002 concerning the National System of Research, Development and Application of Science and Technology, states that: "Technology is a method or method as well as a process or product resulting from application and utilization of various disciplines, science that produces value for the fulfillment of needs, continuity and improvement of the quality of human life". Meanwhile, the transfer of technology in Article 1 Number (11) is: "the transfer of the ability to utilize and control science and technology between institutions, agencies, or people, both within the country and from abroad to within the country and vice versa".

The government's policy to support the acceleration of technology transfer, in this case in the industrial sector, must be emphasized by the application of the concept of Transfer of Intellectual Property Rights and Transfer of Technical Know-How, this efforts aims to

⁹ Slamet Yuswanto, "Upaya Mewujudkan Alih Teknologi Melalui Waralaba," *University Of Bengkulu Law Journal* 4, no. 1 (2019): 71-90, <https://doi.org/10.33369/ubelaj.4.1.71-90>.

¹⁰ Niken Sari Dewi and Suteki, "Obstruksi Pelaksanaan Lisensi Wajib Paten Dalam Rangka Alih Teknologi Pada Perusahaan Farmasi Di Indonesia," *Law Reform* 13, no. 1 (2017): 1-17, <https://doi.org/10.14710/lr.v13i1.15947>.

¹¹ Candra Irawan, "Pengaturan Alih Teknologi Pada Kegiatan Penanaman Modal Untuk Percepatan Penguasaan Teknologi Di Indonesia," *Supremasi Hukum: Jurnal Penelitian Hukum* 28, no. 1 (2019): 71-82, <https://doi.org/10.33369/jsh.28.1.71-82>.

¹² Reinardus Budi Prasetyo, "Perkembangan Aspek Hukum Alih Teknologi Di Indonesia," *PROGRESIF: Jurnal Hukum* 15, no. 2 (2020): 108-35, <https://doi.org/10.33019/progresif.v15i2.1822>.

¹³ Erman Rajagukguk, *Hukum Investasi Di Indonesia* (Jakarta: Fakultas Hukum Universitas Indonesia, 2005), h. 38.

¹⁴ *Ibid.* h. 39.

encourage foreign companies and principal companies to be more serious in transferring technology in the industrial sector.¹⁵ Patents in technology transfer which are ownership of intellectual property rights in the industrial sector,¹⁶ this is question that is how the relationship between technology and patents is. When we talk about technology, talking about patents is very relevant. Because most of the technology needed for industrial development is patented and these patents are owned by companies in industrialized countries.¹⁷ As regulated in Article 1 paragraphs (1) and (2) of Act Number 13 of 2016 concerning Patents, it can be seen how close the relationship between technology and patents is. In the formulation of the article that patents are aimed at inventions in the field of technology, while the invention itself is also a solution to certain problems in the field of technology. So when we talk about technology, we talk about patents, although not all technologies can get patents and/or be patented by their inventors.¹⁸

Law as a means of social reform must be able to provide regulation for new developments, for that technology transfer also needs to be regulated by Indonesian law so that science could be cleared to the related party.¹⁹ As a developing country which know that technology have an important role in accelerating national socio-economic development and in particular in expediting the increase in the production of goods and services in the industrial sector. Industry and the entry of appropriate foreign technology from abroad into the country with favorable terms, conditions and prices for the national interest, will enlarge the role of science and technology in the industrial life of the Indonesia nation.

The use of new technology or transfer of technology must receive adequate arrangements so that the business world will avoid copying other technologies, and this is in line with the general agreement on tariffs and trade which is a multilateral trade agreement which basically aims to create free trade, equal treatment and help create economic growth and development in order to realize human welfare. As an example of the implementation of the implementation of technology transfer, namely the license agreement between PT XL Axiata Tbk (formerly PT Excelcomindo Pratama Tbk), or abbreviated as XL as the licensee and Blackberry 2 as the licensor in the context of technology development in Indonesia.

This is also in accordance with the Cerds charter which states that every country has the rights to benefit from the progress and development of other countries' science and technology to improve its economic and social development, equal treatment and help create economic growth and national development in order to realize human welfare.²⁰

¹⁵ Rustam Magun Pikahulan, "Konsep Alih Teknologi Dalam Penanaman Modal Di Indonesia Bidang Industri Otomotif," *Cakrawala Hukum* 13, no. 2 (2017): 72–88.

¹⁶ Muchtar Anshary Hamid Labetubun, "Public Domain in Dispute Settlement of Cancellation of Industrial Design Rights," *International Journal of Innovation, Creativity and Change* 10, no. 5 (2019): 30–42, <https://doi.org/10.53333/IJICC2013/10503>.

¹⁷ M Richhard Bukbaun T. Mulya Lubis, *Peranan Hukum Perekonomian Di Negara-Negara Berkembang* (Jakarta: Yayasan Obor Indonesia, 1986), h. 236.

¹⁸ Rory Jeff Akyuwen, Muchtar Anshary Hamid Labetubun, and Marselo Valentino Geovani Pariela, "Clausula Restrictions In Technology Transfer Patent License Agreements That Impact On Unfair Competition," *Journal of Legal, Ethical and Regulatory Issues* 24, no. 3 (2021): 1–9.

¹⁹ *Ibid.* h. 40.

²⁰ Huala Adolf, *Hukum Ekonomi Internasional Suatu Pengantar* (Jakarta: Raja Grafindo Persada, 2005), h. 217.

Based on the categories above, it is clear that the use of new technology or technology transfer, especially in the industrial sector, must receive adequate arrangements so that the business world will avoid copying other technologies, and this is in line with the general agreement on tariffs and trade which is a multilateral trade agreement which was basically aims to create free trade.

2. METHOD

This type of research in the preparation of legal writing is normative legal research. Peter Mahmud Marzuki said that legal research is a process to find the rule of law, legal principles, and legal doctrines in order to answer the legal issues faced.²¹ The type of research used in this research is descriptive analytical,²² namely formulating research results, it is possible to describe various findings either through empirical research or library research and the legal material obtained will be analyzed and studied in a structured writing system, so that the results are discriminated against. The conclusions will be drawn and equipped with suggestions. The main source in normative legal research is legal material which contains normative rules. The legal materials used are: Primary legal materials consisting of Act Number 18 Year 2002 concerning the National System of Research, Development and Application of Science and Technology, Act Number 25 Year 2007 concerning Investment. Secondary legal materials are law books, legal science journal, legal research reports, legal articles and seminar materials and so on.²³ Tertiary legal materials, namely materials that provide instructions and explanations of primary legal materials and secondary legal material, consisting of dictionaries, encyclopedias. Processing and analysis of legal materials used to analyze how to use of legal materials that have been collected to be used in solving research problems, thus the data or results that have been collected or encountered by the authors in this study, will then be analyzed using the "Qualitative Analysis Method" meaning that legal materials that have been collected or encountered must be separated according to their respective categories and then interpreted in an effort to reach answers to research problems.

3. RESULTS AND DISCUSSION

3.1 Technology Transfer to Foreign Investmen

The term PMA is a translation of the English, namely foreign investment. The definitions of foreign investment is found in Article 1 of Act Number 25 Year 2007 concerning investment. Foreign Investment is only foreign direct investment which is carried out according to or based on the provisions of the Act and is used to run a business in Indonesia.

Technology is often equated with production techniques or mere tools. It is assumed that if the technology is successful in the country where it is created and developed, then the technology is successful in any area.²⁴ This assumption cannot be justified, because technology does not function in a "social vacuum". But it depends on social conditions, infrastructure, both physical and labor, as well as the availability of raw materials.

²¹ Peter Mahmud Marzuki, *Penelitian Hukum*, (Jakarta: Kencana, 2016), <https://doi.org/340.072>. h. 35.

²² Ronny Hanitijo Soemitro, *Metodologi Penelitian Hukum Dan Jurimetri* (Jakarta: Ghalia Indonesia, 1990), h. 12.

²³ Baher Johan Nasution, *Metode Penelitian Ilmu Hukum* (Bandung: Bandung: Mandar Maju, 2008), h. 86.

²⁴ Suparji, *Pengaturan Penanaman Modal Indonesia* (Jakarta: Universitas Al-Azhar Indonesia, 2014), h. 66.

Simplifying technology transfer to simply transferring production tools and techniques is the same as expecting these things to be effective enough to solve all problems.²⁵

The entry of foreign investors into Indonesia by bringing advanced technologies into the country can benefit Indonesia because of a technology transfer programme.²⁶ Technology transfer is not a simple thing at all, because it often faces dilemmas, among others: first, technology is not something that is cheap. The dilemma lies in the extent to which Third World Countries are willing to pay the hefty price of technology. For high-tech industries, purchasing technology separately (partial) is almost impossible. Second, on the one hand, third world countries want to maintain and maintain independence, but on the other hand, with this technology transfer, it is not impossible for the state to give up some of that independence. It is very likely, the technology that is included causes technological dependence (technological dependency). Third, if the dependence on this technology is getting higher, the creativity of the community and school children will decline. Laziness to work hard also appears. The worst consequence is the reduction in employment, resulting in layoffs and increasing unemployment and poverty. This is the inhuman face of technology transfer.²⁷

Technology transfer is basically difficult to implement, because usually technology is not transferred, but traded (buying-selling) widely international markets. If we examine technology transfer, then we are actually talking about the import of technology from industrialized countries, in this case western countries. Historically, the development of modern technology due to the capitalist industrial revolution in the West has killed the technology that has been developing for so long in thirs world countries.

In Indonesia, until now, there are not any regulations that explicitly regulate technology transfer in foreign investment, although this does not mean that there are not any regulations governing this matter. This Investment Regulation in Indonesia always implies technology transfer in foreign investment activities. This can be found both in Act Number 1 Year 1967 concerning Foreign Investment and in Law number 25 Year 2007 concerning Investment. Article 10 paragraph 4 of the Investment Act states that investment companies employing foreign worker are required to provide training and transfer technology to Indonesian citizens in accordance with the provisions of the legislation. Departing from the provisions of the article, the transfer of technology needs to be studied more deeply regarding its position in positive law in Indonesia.

Technology transfer in investment, especially foreign investment, so far does not have its own rules, but here are several provisions in the investment act that directly or indirectly mention technology transfer. The preamble to Act Number 1 Year 1967 concerning foreign investment clearly stipulates that one of the main objectives of the enactment of the law is to advance the Indonesian nation, one of which is through technological progress. At the time the government was well aware that the lack of capability and technology caused the slow development. This can be seen from the letters (a), (c), and which read as follows:

1) Precautions of letter a

That there is a lot of potential economic power, which by the grace of God Almighty, throughout the country which has not been processed to become a real

²⁵ *Ibid*

²⁶ Kadek Devi Arta Adnyani, I Nyoman Putu Budiarta, and Ni Made Puspasutari Ujianti, "Perlindungan Hukum Terhadap Penerima Lisensi Paten Dalam Alih Teknologi," *Jurnal Interpretasi Hukum* 1, no. 1 (2020): 24–29, <https://doi.org/10.22225/juinhum.1.1.2180.24-29>.

²⁷ *Ibid*.

economic force, which is caused, among other things, by lack of capital, experience and technology.

2) Consideration letter c

That economic development means processing potential economic power into real economic strength through investment, use of technology, addition of knowledge, improvement of skills, addition of organizational and management capabilities.

3) Precautions for the letter e

Whereas at the same time, the principle of basing on one's own abilities should not create reluctance to utilize the potentials of capital, technology and skills available from abroad, as long as everything is truly dedicated to the economic interests of the people without causing dependence on foreign countries.

In the provisions of Article 5 of Act Number 1 Year 1967, the government regulates the priority of fields open to foreign investment. In paragraph (2) that article stated that the details according to the order of priority are determined each time the government prepares medium-term and long-term development plans, taking into account economic and technological developments. In the process of technology transfer related to Foreign Investment, there are 5 (five) parties involved, namely:

- 1) Technology owner as technology provider
- 2) The country that owns the technology is a developed country
- 3) Technology receiver
- 4) Technology recipient countries. This country is a country whose technology is not yet high, where a lot of work is still done manually.
- 5) International/UN institution. Given that technology has become a commodity that is needed by all countries, the role of organizations and the international community becomes important.

Technological improvement is one dimension of national economic development, which aims to accelerate the availability of goods and tools needed by the general public, due to increase in people's per capita income, and on the other hand technological development is in line with economic development whose targets are aimed at expanding job opportunities in the community.

3.2 Transfer of Technology Related to Foreign Investment

In the current era of the industrial revolution, the progress of a country shifts from mastery of natural resources to mastery of science and technology.²⁸ Technology transfer or technology transfer from one country to another, generally from developed countries to developing countries can be done in various forms depending on the type of technological assistance needed for a project. Technology transfer is used as a means through a process so that developing countries can master technology as happened in developed countries, in fact technology transfer is usually carried out from one country to another, generally from developed countries to developing countries. This technology transfer can also be carried out in several ways of course, depending on the form of technology assistance required for the project, and transnational corporations being a key factor in this process. The ways to transfer technology include:

- 1) Foreign Direct Investment

²⁸ Dewi Sulistianingsih, Andry Setiawan, and Muchammad Shidqon Prabowo, "Potret Tumpuan Perguruan Tinggi Dalam Upaya Alih Teknologi," in *Seminar Nasional Hukum Universitas Negeri*, vol. 7 (Semarang: Fakultas Hukum Universitas Negeri Semarang, 2021), 689-704.

Foreign Direct Investment is a long-term investment directly invested by foreign companies.²⁹ In this form of technology transfer, investors have control over asset management and production. To attract foreign investors, third world countries carry out various policies such as liberalization, privatization, maintaining political stability, and minimizing government interference. Indonesia as a third world country or a developing country has implemented policies related to this method. It is proven by the promulgation of Act Number 25 Year 2007, even before the existence of this law, there were already two laws governing investment, of course, they regulated efforts to transfer technology. However, so far it has been less effective. Especially for the investment in the automotive industry itself. We all know that the national automotive industry is an old discourse, a long time since Soeharto's New Order era. However, until now the national automotive car industry has not been realized, so the researchers consider that a more in-depth study is needed as to what causes it. According to a Media report (KOMPAS), the desire for a technology transfer process is often conveyed by officials at the Ministry of Industry when discussing several important sectors in Indonesia, including the automotive industry. This is based on the fact that Indonesia is one of the big markets for the automotive manufactures.

2) Joint venture

Joint venture is a collaboration (partnership) between companies originating from different countries with the aim of making a profit, in this form, ownership is calculated based on the shares owned. This type of technology transfer is interesting because in a way like Indonesian workers and experts from abroad can work together in making one product directly so that it is possible to speed up technology transfer easily. This relates to the transfer of knowledge, which requires investors to educate Indonesian workers as an effort to develop the quality of human resources. This education is ideally a means of technology transfer. Efforts like this in order to carry out. Transfer of shares or Indonesianization of shares (divestment) aims to accelerate the control of the company's control (along with software, information and technology). However, on the one hand, foreign investors use this method so that foreign companies can avoid the nationalization of the company. So it must be watched out for by means of supervision in the process of training and education organized by foreign parties.

The automotive industry in Indonesia is partly carried out in the form of a Joint Venture, such as:

- a) PT. Toyota Gosei Safety System Indonesia is a joint venture between PT. Toyota Gosei Co., Ltd. With PT. Astra Otoparts Tbk
- b) PT. Toyota Astra Motor, is a joint venture between PT. Astra International, Tbk with Toyot Motor Corporation, Japan.
- c) PT. Astra Honda Motor, is a joint venture between PT. Astra International, Tbk with Honda Motor Co., Ltd, Japan.
- d) PT. Astra Otoparts Tbk with Denso Corporation, Japan.
- e) PT. Astra Otoparts Tbk with akebono Corporation, Japan and many more.

3) Licensing Agreement

Licensing Agreement, are written permission from one company to other companies to use its trade name (trade mark), technology, patent, copyright, or other expertise. The definition of a license itself is a permit to enjoy the economic benefits of an object protected

²⁹ Jonker Sihombing, *Hukum Penanaman Modal Di Indonesia* (Bandung: Alumni, 2009), h. 15.

by IPR for a certain period of time.³⁰ In return for granting the license, the licensee is obliged to pay royalties in a certain amount and for a certain period of time. Considering the economic rights contained in each exclusive right are many types, the license agreement can have many variations. There are license agreements that give licensees permission to enjoy all existing exclusive rights, but there are also license agreements that only give permission for some exclusive rights, for example a license for production only, or a license for sales only. In this way the licensee must operate under certain conditions which include the payment of wages and royalties. This method is used by foreign companies with Third World Country partners, so that developing countries may want to pay royalties to foreign companies. In technology transfer contracts, licensing is usually in the form of a patent agreement. In granting written permission for one more technology rights (license) from the licensor to the licensee, it is necessary to comply with a number of terms and conditions that must be met by both parties, because in these terms and conditions each determines the "business expectation" of the legal commitments made promised.³¹ So that through these terms and conditions the rights (expected gains) and obligations (sacrifice) of each party are determined to be balanced and fair. Among the various terms and conditions that need to receive the main attention are the following:

- 1) Exclusivity or non-exclusivity the granting and acceptance of licenses can be exclusive and non-exclusive, can be viewed from the perspective of the licensee or licensee with different interest. For broad marketing purposes, Licensor usually requires the granting of a non-exclusive license, so that the license can be used by more licensees.
- 2) Restriction on types of activities.

Licenses are not granted indefinitely, and such restrictions may be specified in a number of ways. These methods include: a).The licensee may receive the know-how rights to manufacture and use the trademark to sell the product concerned. b).The Licensee may receive the know-how rights to produce, but the rights to use the trademark is granted to another licensee to market it. c).The licensee only gets the right to use the company's brand is running his own business. Licensing Agreement, are also used in automotive industry companies in Indonesia. For example, such as granting a license from Toyota Motor Corporation Japan (TMC Japan) to PT. Toyota Astra Motor (PT. TAM), but based on research conducted by Agus P. Silaen, the Toyota license agreement between TMC Japan and PT. TA is stated in the form of a standard agreement which is determined unilaterally by the licensor/Principal, while the licensee only accepts and signs the agreement.³² And the rights and obligations of the parties have been formulated in the form of a standard agreement. Therefore, if this is the case, will the government just remain silent regarding this issue and yearn for technology transfer in the automotive industry. Meanwhile, the formulation of these rights and obligations is not in line with the principle of freedom of contract (freedom of contract, autonomous party), the principle of balance and the principle of equality of rights. For this reason, if this country wants to go through the technology transfer process, it is recommended that the Government prepares and anticipates the situation and conditions of development by fixing and perfecting the apparatus and legal instrument that govern it.

³⁰ Muhammad Djumhana and R. Djubaedillah, *Hak Milik Intelektual, Sejarah, Teori Dan Prakteknya Di Indonesia* (Bandung: Citra Aditya Bakti, 2009), h. 23.

³¹ Achmad Zen Umar Purba, *Hak Kekayaan Intelektual Pasca TRIPs* (Bandung: Alumni, 2005), h. 63.

³² Agus P Silaen, "Perjanjian Lisensi Atas Hak Kekayaan Perindustrian Dalam Perspektif Hukum Bisnis (Suatu Studi Pemberian Lisensi Toyota Motor Corporation, Japan Kepada PT. Toyota Astra Motor)" (Universitas Sumatra Utara, 2001).

4) Turnkey Projects

Turnkey projects, namely building the infrastructure and construction needed by foreign companies to carry out production processes in Third World Countries. In this way, when the facility is ready to operate, the foreign company hands it over to a domestic company or other organization. In addition, foreign companies also organize training for domestic workers so that one day they can take over all the required production processes. So here again, supervisions and commitment is needed to the agreement that has been made so that there is seriousness in conducting training to operate the production process. In the automotive industry, the facts on the ground are based on Investor Daily Source: The government will urge Japan to be more serious about technology transfer in the automotive sector. Technology transfer through the Manufacturing Industry Development Center (MIdec) scheme is part of the Indonesia-Japan Economic Partnership Agreement (IJ-EPA) which was signed by the two countries in 2007. However, the programme did not work as it should. Saleh Husin while serving as Minister of Industry stated that, "We have a strong bargaining position as a market as well as a base for Japanese automotive production. So we will ask Japan to do more technology transfers, one of which is in the automotive sector," said Minister of Industry (Menperin) Saleh Husin when he visited the editorial office of Investor Daily in Jakarta. Based on the facts above it can be interpreted that Japan in this case is not serious in conducting training related to the process of producing automotive products even though the two countries have entered into a partnership agreement in the economic field. Therefore, this is a homework that must be completed by the government, so that there is seriousness in conducting workforce training so that the technology transfer process can run effectively.

5) Know-how Contract

Know-how contract is a provision regarding the transfer and acquisition of technology in written form that is separate from the license contract for certain reasons.³³ It also allows provisions set out in licensing contracts relating to invention patents or other objects of industrial property rights. Even this is very possible when the owner of the invention is also developer of the know-how rights. For example, a layout diagram of factory equipment, parts lists and new material specifications, machine operation manual instructions, packaging and job descriptions.³⁴

Transfer of technology from one country to another, generally from developed and developing countries can be done in various ways depending on the type of technological assistance needed for a project. Technology can be transferred in the following ways.³⁵

- 1) Employ individual foreign experts.
In this way, developing countries can easily get technology, in the form of techniques and manufacturing processes that are not patented. This method is only suitable for small and medium-sized industries.
- 2) Organizing the supply of machines and other equipment. This supply can be made under a separate contract.

³³ Suyud Margono and Amir Angkasa, *Komersialisasi Aset Intelektual Aspek Hukum Bisnis* (Jakarta: Gramedia Widiasarana Indonesia, 2002), h. 120.

³⁴ *Ibid*

³⁵ *Ibid*

- 3) The licensing agreement in technology, the technology owner can facilitate the technology by granting the rights to every person/entity to implement the technology with a license.
- 4) Expertise and assistance, technology. Expertise and assistance can be in the form of :
- 5) Pre-investment study.
- 6) Basic pre-engineering.
- 7) Specifications of machines.
- 8) Installation and operation of machines.
- 9) Management.

Technology transfer in reality has to be bought at a high price. In essence, technology has become an expensive and rare commodity because there are many request for this situation to be increasingly displayed because the transfer of foreign capital investment technology is always associated with fields that are the authority of intellectual property rights (IPR). IPR has been dissolved in the stage of selecting the technology used, at the production stage and so when the product is marketed. It is even alleged that IPR has become a trading commodity itself.³⁶

3.3 Technology Transfer Procedure in Foreign Investment

Hilman Surawiguna mentions the notion of transfer technology conveyed by: “The process of transferring from one production unit to another unit of knowledge requirements (know-how) to enable the use of the technology.³⁷ Transfer of technology from one country to another, generally from developed and developing countries can be done in various ways depending on the type of technological assistance needed for a project. Technology can be transferred in the following ways:³⁸

- 1) Employ individual foreign experts. In this way developing countris can easily obtaon technology, in the form of techniques and manufacturing processes that are not patented. This method is only suitable for small and medium-sized industries.
- 2) Organizing the supply of machines and other equipment. This supply can be made under a separate contract.
- 3) The licensing agreement in technology, the technology owner can facilitate the technology by granting the right to every person/entity to implement the technology with a license. Expertise and assistance, technology and assistance can be in the form of :
 - a) Pre-investment study.
 - b) Basic pre-engineering.
 - c) Specifications of machines.
 - d) Installation and operation of machines.
 - e) Management.

³⁶ Insan Budi Maulana, *Catatan Kecil UU Buruh Baruh, Kumpulan Makalh Berjudul Strategi Bisnis Di Bidang Hak Cipta* (Jakarta: LPIHM, Institute of Business Low & Legal Manajemen, 2003), h. 24.

³⁷ Hilman Surawiguna, *Beberapa Masalah Pokok Perusahaan Multinasional, Sebuah Tinjauan Pustaka, Manajemen Dan Usahawan Indonesia* (Jakarta: Ghalia Indonesia, 2001), h. 41.

³⁸ *Ibid*

The International Code on the Transfer of Technology compiled by the United Nations Conference on Trade and Development (UNCTAD) classified the types of technology transfer, including:³⁹

- 1) Delivery, sale, and license in the form of industrial goods, except for the sale of mark, service of the mark, and sale of the name when they are not part of the technology transfer contract;
- 2) Transfer of knowledge and technical skills through learning, planning, diagrams, models, instructions, formulas, basic or detailed designs of machines, specifications, and tools for training, services including technical advisory, managerial, and personal training;
- 3) The need for knowledge transfer regarding the installation, operation, and utilization of plants and equipment, as well as turnkey projects;
- 4) Transfer of technology for expertise, installation and use of machines, tools, semifinished goods and/or raw materials that have been obtained from purchase, borrowing or otherwise;
- 5) The transfer of industrial technology and technical arrangements or technology transfer cooperation is a technology transfer process.

Based on the list of technology transfer methods above, it does not include non-commercial technology transfer, such as technology transfer contained in international cooperation agreements, for example related to the development of infrastructure or the agricultural sector or international agreements in the fields of research, education, employment, or transportation.⁴⁰

The process of technology transfer from abroad can be interpreted into 3 (three) stages:

- 1) Transfer of existing technology to produce certain goods or services;
- 2) The integration of technology in developing countries;
- 3) Development of human resources capabilities in terms of innovation.

Some of these technology transfer mechanisms are well-known types of activities, while there are several other technology transfer mechanisms, such as: management contracts, marketing contracts, technical service contracts, turnkey contracts, international sub-contracting.

3.4 Implementation of Technology Transfer in Foreign Investment in Indonesia

The development of technology policies in developing countries depends on local technological capabilities and technology transfer selected from abroad, which can complement national research and development and technological growth created by local capabilities.⁴¹ Technology transfer can occur if the community has the ability to master technology. Technological mastery is the ability to use technology effectively and is achieved through technological efforts.⁴²

Technological efforts are sincerity not to be closed with technological information, as well as to actualize the acquired technological knowledge to select, blend, and adapt

³⁹ *Ibid*

⁴⁰ Sabartua Tampubolon, *Politik Hukum Iptek Di Indonesia* (Yogyakarta: Kepele Press, 2013), h. 218.

⁴¹ Nur Aisyah Thalib, Budi Santoso, and Paramita Prananingtyas, "Problematika Ketentuan Alih Teknologi Melalui Lisensi Paten Di Indonesia," *Diponegoro Law Journal* 8, no. 1 (2019): 1374–83.

⁴² Ridwan Khairandy, "Praktek Perdagangan Restriktif Dalam Pengalihan Teknologi Melalui Kontrak Lisensi," *Jurnal Hukum IUS QUIA IUSTUM* 3, no. 5 (1996): 16–27, <https://doi.org/10.20885/iustum.vol3.iss5.art3>.

to existing technology by creating new technology, so that technological efforts are needed to: assess and select technology, acquire and carry out production processes and procedure goods, manage changes in products, production processes, organizational procedural arrangement, and create new technologies.⁴³

Through these technological efforts, it is hoped that local and domestic investors will be able to use and or utilize existing technology for value added processes in producing manufactured goods that are already available in the market. Through the hi stage, these stage, the ability is developed to understand the techniques and production methods that have been developed abroad and are able to be applied domestically through joint ventures.

A conducive investment climate and continuous efforts by the Government to improve itself, Indonesia will remain a promising investment destination for investors, because there are several advantages or benefits that we can get from the entry of foreign investment into Indonesia, including:⁴⁴

- 1) The entry of new capital to help fund various underfunded sectors.
- 2) This foreign investment also opens up a lot of new job opportunities so that the unemployment rate can be reduced.
- 3) The entry of foreign investment is usually accompanied by technology transfer. They bring new technological knowledge to Indonesia which will eventually be developed in Indonesia as well.
- 4) Foreign investors will cooperate with MSMEs (Micro, Small and Medium Enterorise). The involvement of MSMEs will certainly encourage community economic growth.
- 5) MSMEs or domestic have the opportunity to market their products to international markets.
- 6) Increase state revenue through taxes.
- 7) Creating a more stable relationship in the economic sphere of the two countries.

The problem of technology is a problem that has always been faced by developing countries since the country has directed its economic development by focusing on the industrial sector, until the industrial sector is used as the backbone of the national economy. However, to carry out this development, most developing countries including Indonesia face several main obstacles in technology transfer, namely: funds, experts and technology itself.

Indonesia as a developing country that requires technical know-how from abroad, our government receives free technical know-how from developed countries and international institutions. With the licensing agreement as one of the tools used to transfer technology, more and more investors are investing in Indonesia.

The patent license agreement is one form of technology transfer that can be carried out to cover the unavailability of the technology needed in the country. A license is a license granted by a patent holder, both exclusive and non-exclusive, to a licensee based on a written agreement to use the protected patent for a certain period of time and under certain conditions. The patent license agreement has a major role in advancing the national economy, namely as a function of government control and supervision in the field of

⁴³ *Ibid*

⁴⁴ Kementerian Investasi/BKPM, "Penanaman Modal Asing Di Indonesia," accessed August 18, 2021, <https://www.investindonesia.go.id/id/artikel-investasi/detail/penanaman-modal-asing-di-indonesia>.

technology, which will ultimately have an impact on the implementation of technology transfer.

Law as a means of social reform must be able to provide regulation for new developments, for that technology transfer must be regulated by Indonesian law. Regulations regarding technology transfer need to be considered in the framework for the entry of new technology in Indonesia, in this case such as Blackberry Ltd transferring technology to PT XL Axiata Tbk through a license agreement.

Based on the patent license agreement between Blackberry Limited and PT XL Axiata Tbk, it appears that the use of new technology or technology transfer must receive adequate arrangements so that it is in line with the general agreement on tariffs and trade which is a multilateral trade agreement which basically aims to create free trade, equal treatment and help create economic growth and development for the realization of human well-being.

Legal arrangements in the field of technology transfer, especially those relating to patent licensing, need to clearly define and must explain the mechanism of technology transfer from foreign technology owners to Indonesian technology, so that the production of a technology will be more widespread to developing countries.

Although Act number 13 Year 2016 concerning Patents only regulates inventions and their protection for inventors, it does not mean that technology transfer is not regulated. The transfer of technology is still regulated, but the regulation of technology transfer is intended to protect inventors who own patents. Because if the invention on the field of technology has the power of benefit for the community, it is very possible for other parties to be interested in producing it.

Thus, according to the provisions stipulated in the Patent Law, the position of the inventor who owns the patent has received legal guarantees and certainty, but with regard to how the technology is transferred, it still allows for ambiguity to arise which results in legal guarantees and certainty, but with regard to how the technology is transferred, it still allows for ambiguity to arise which results in legal uncertainty because the Patent regulation only states that technology transfer is carried out. With license agreement and does not set out in detail how the license agreement is carried out.

The use of technology is now so widespread and new inventions are created every time, while competition in the industrial sector encourages the use of the latest technology. Efforts to find the most appropriate and economical technology requires a team with extensive and deep industry experience. This effort is very expensive in addition to the costs for the research experts themselves, then usually the end result is drowned in the technology library. As a result, research on technology becomes very expensive because to achieve success is very minimal.

There are at least two important reasons to describe the importance of technology transfer, namely:

- 1) Exclusive rights to use or work on an invention are owned by the owner of the invention, without authorization from the rights owner because they cannot do anything with the invention.
- 2) Not all of the knowledge (know-how) that is used useful for the operation of an invention is referring to the description of the invention which states that the invention contains a patent document.

Thus, technology transfer or technology transfer through this patent license will provide benefits for technology within a corporation or company, namely business products become markable, so that they can support the development of national technology even though there are criticisms related to the juridical aspect and impact of cultural changes from the transfer, technology from one country to another.

The implementation of technology transfer cannot be carried out properly, because there are obstacles in the implementation of technology transfer, including:

1) Juridical Barriers

The process of technology transfer in joint venture companies in general and Blackberry Limited and PT XL Axiata Tbk in particular, faces juridical obstacles, namely because technology is part of the overall capital, so that the process of transfer, rights and obligations are blurred because technology transfer is not regulated specifically in the technology transfer contract and is not included in one of the clauses in the joint venture contract. Technology as an element of capital as regulated in the Foreign Capital Investment Regulation causes the determination of technology choices to be carried out unilaterally, namely the technology owner.

Efforts to overcome this juridical barrier are that the joint venture company cannot overcome the juridical obstacles it faces directly. In principle, the juridical arrangement of technology transfer is the main source of stagnation for Limited Liability Companies that are joint ventures. Therefore, companies have an interest in overcoming obstacles, but in an indirect way. The way to do this is to proactively provide input to the government on the juridical obstacles it faces through existing mechanisms. The mechanism that has been taking place so far is through the General Meeting of Stakeholders (GMS), which media that brings together the management and stakeholders, especially minority shareholders.

2) Non Juridical Barriers

a) Obstacles in the implementation of Technology Transfer of a technical nature.

In general, during the process of implementing technology transfer and the training process, there are two types of obstacles, namely technical barriers and non technical barriers. The technical barriers are barriers that directly affect the technology transfer process in this case is the language system. In principle, manuals, both in the form of guiding books of machine operating and guiding books of machine maintenance, use English and can still be mastered by prospective machine operators because they are equipped with charts and pictures. Meanwhile, the technical obstacle that is very pronounced is the use of Japanese which is very difficult to learn and understand, in addition to the model of lettersm writing and pronunciation which are very different from Indonesian.

Efforts to overcome these technical barriers are carried out by conducting foreign language training. Language training is done by interacting directly with native speakers. Increasing the ability to use a foreign language as a conversational language is very useful when communicating with foreign management who have an office and live in Indonesia on a daily basis. Actually, there are many advantages of being able to communicate in Japanese, one of which is discussing the state of the company on the sidelines of work. In addition to conducting foreign language training, other technical obstacles are carried out by strengthening cooperation with training providers, both national and international. National cooperation is carried out with the Ministry of Manpower by sending nominations to be involved in sending worker training abroad. Meanwhile, international cooperation (Asian level) is carried out with management training organizations (AOTS). The

collaborations carried out by foreign capital investment, both at the national and international levels, are one way to overcome problems that are very technical and affect the company's activities.

b) Obstacles in the implementation of Non-Technical Transfer of Technology

Eventhough Blackberry Limited and PT XL Axiata tbk are already operating in Indonesia, judging from their production management activities, the company is still in the first phase and is not trying to make improvement to the higher technology transfer phase. Apart from cultural factors, namely the attitude of employees in the management and production sector employees who only position themselves as workersd alone, also because of non-cultural factors such as their weak understanding of the regulations, both investment regulations, joint venture and specifically the regulation on technology transfer.

Non-technical obstacles are overcome by continuously strengthening business/corporate relations. In addition to building a domestic market, the affiliation is also intended to divide the work so that the production at the affiliated companies is touched by newer technology. Strengthening this relationship is also intended to access new technologies that are not yet known.

4. CONCLUSION

The legal implications of technology transfer can occur in various forms, such as hiring foreign workers individually, licensing agreement, and others. Investment companies are required to improve the competence of Indonesia citizens through job training and investment companies that employ foreign workers are required to organize training and transfer technology to Indonesian workers. Technology transfer is required by investment regulation in Indonesia which is carried out through training procedures and capacity building of the national workforce. Technology transfer is required because the need for technology in the current industrial era must be addressed immediately, especially in order to achieve independence in national development in general and industrialization in particular.

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